

# WILSONWERKS ARCHIVES

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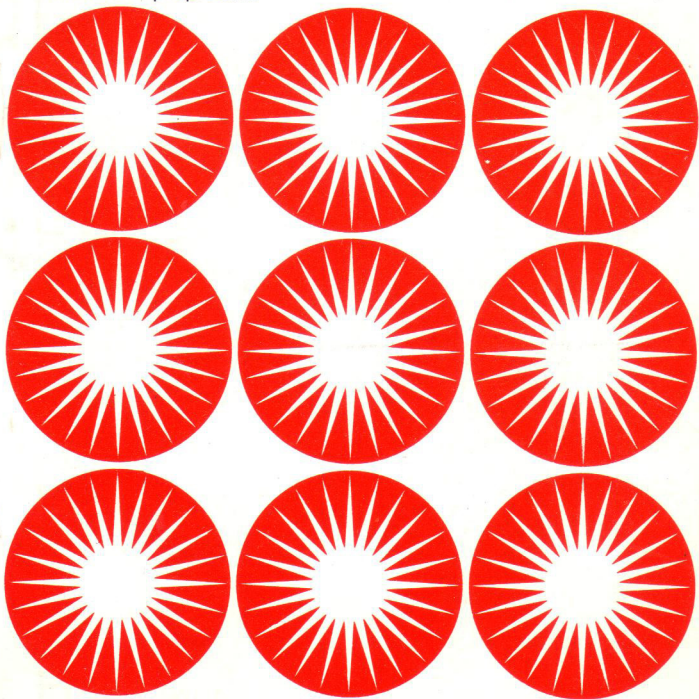
# Vivitar®

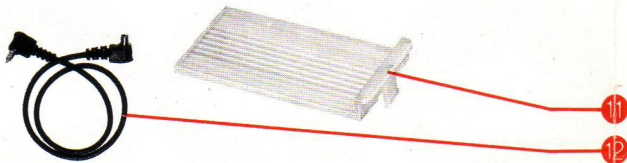
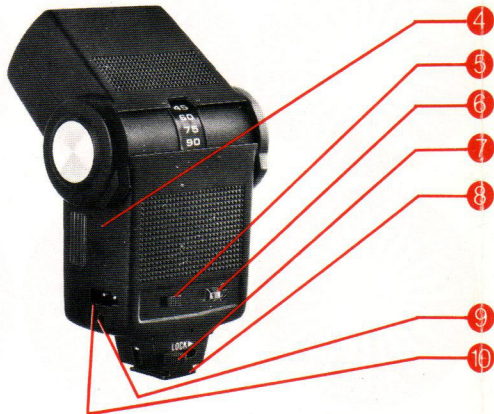
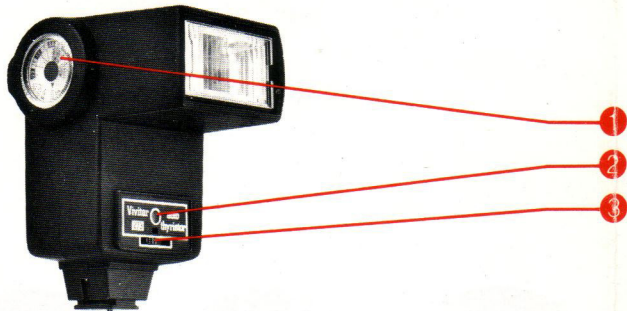
## automatic electronic flash

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### Model 273

Owner's Manual  
Gebrauchsanleitung  
Manuel du propriétaire  
Manual del propietario





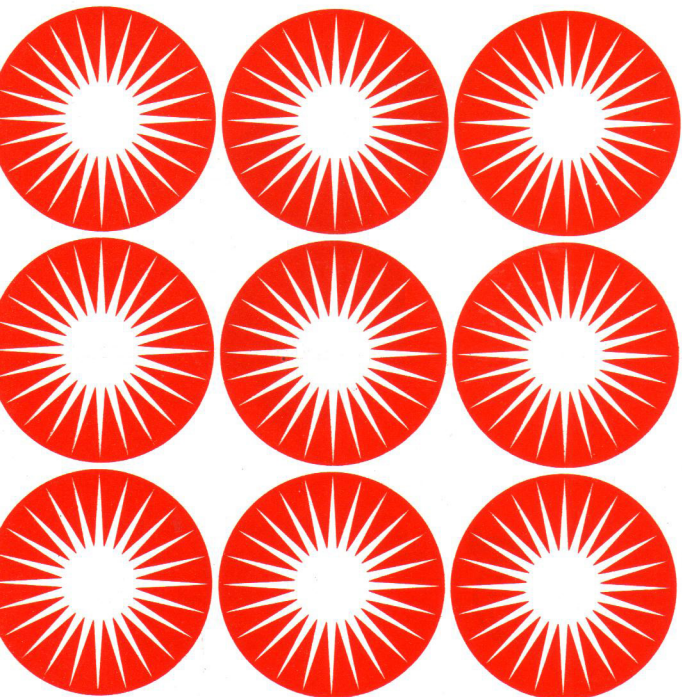
**CONGRATULATIONS . . . AND WELCOME** to the ever-increasing number of photographers now enjoying Vivitar electronic flash. This Owner's Manual is a handy reference guide and we suggest you refer to it whenever questions arise.

We thank you for selecting this product and hope that the added versatility of automatic bounce flash lighting brings you many years of picture-taking enjoyment.

## Description of controls

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- 1 Illuminated Calculator Dial
- 2 Sensor
- 3 Mode Selector
- 4 Battery Compartment Cover
- 5 On-Off Switch
- 6 Ready Light/Open Flash Button
- 7 Mounting Foot Lock Lever
- 8 Mounting Foot
- 9 Shutter Cord Socket
- 10 AC Adapter Receptacle  
(AC Adapter optional accessory, not included)
- 11 Wide Angle Attachment
- 12 Detachable Shutter Cord



## IMPORTANT

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You have another power option—NiCad batteries! Your new Vivitar Model 273 will operate on AA size Nickel Cadmium batteries. NiCads, in addition to being rechargeable, also provide a faster recycling time. There are several brands of NiCad batteries currently available, along with supplementary charging units. (The batteries are recharged outside the flash.)

**CAUTION:** When using *NiCad batteries*, do not fire your flash continuously for more than 25 times or you may damage your flash. Wait a few minutes before you resume firing.

## IMPORTANTE

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Se halla a su disposición otro sistema opcional de alimentación eléctrica: las baterías NiCad. Su nuevo Modelo 273 Vivitar funciona también con baterías de níquel-cadmio del tamaño AA. Dichas baterías, además de ser recargables, permiten su reutilización con mucha más rapidez. En la actualidad hay disponibles varias marcas de baterías NiCad, juntamente con unidades cargadoras suplementarias. (Las baterías se cargan después de haberlas extraído del flash.)

**PRECAUCION:** Al utilizar *baterías NiCad*, no dispare su flash continuamente durante más de 25 veces, de lo contrario podrá dañar su flash. Espere unos cuantos minutos antes de volver a disparar.



## IMPORTANT

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Une autre option en alimentation électrique se trouve à votre disposition—les batteries NiCad! Votre nouveau modèle 273 Vivitar fonctionnera avec des batteries au nickel cadmium de taille AA. Outre le fait qu'elles soient rechargeables, les batteries NiCad peuvent être remises en oeuvre beaucoup plus rapidement. Plusieurs marques de batteries NiCad sont actuellement disponibles, avec des unités de rechargement supplémentaires. (Les batteries sont rechargées à l'extérieur du flash.)

**ATTENTION:** Lors de l'utilisation de batteries NiCad, ne faites pas plus de 25 éclairs continues à la fois, car vous risqueriez ainsi d'endommager votre flash. Attendez quelques minutes avant de le réutiliser.

## ZUR BEACHTUNG

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Ihr neues Vivitar 273 ist auch mit Nickel-Cadmium-Akkus, die der Größe von Alkali-Batterien 1,5 V entsprechen, zu betreiben. Hier werden verschiedene Fabrikate mit entsprechenden Ladegeräten angeboten. (Das Aufladen geschieht außerhalb des Blitzgeräts). Diese wiederaufladbaren NC-Akkus ergeben eine schnellere Blitzfolgezeit.

**ACHTUNG:** Bei Verwendung dieser NC-Akkus beachten Sie bitte, daß nicht mehr als 25 Blitze in direkter Folge abgegeben werden dürfen, ohne Ihr Blitzgerät zu beschädigen. Legen Sie deshalb nach mehreren Blitzen hintereinander eine Pause von einigen Minuten ein, ehe Sie das Gerät weiterbenutzen.

# IMPORTANT SAFEGUARDS

When using your photographic equipment basic safety precautions should always be followed, including the following:

1. Read and understand all instructions.
2. Close supervision is necessary when any appliance is used by or near children. Do not leave appliance unattended while in use.
3. Do not operate appliance with a damaged cord or if the appliance has been dropped or damaged — until it has been examined by a qualified serviceman.
4. Do not let cord hang over edge of table or counter or touch hot surfaces.
5. If an extension cord is necessary, a cord with a suitable current rating should be used. Cords rated for less amperage than the appliance may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.

6. Always unplug appliance from electrical outlet when not in use. Never yank cord to pull plug from outlet. Grasp plug and pull to disconnect.
7. To protect against electrical shock hazards, do not immerse this appliance in water or other liquids.
8. To avoid electric shock hazard, do not disassemble this appliance, but take it to a qualified serviceman when some service or repair work is required. Incorrect reassembly can cause electric shock hazard when the appliance is used subsequently.

**SAVE THESE  
INSTRUCTIONS**

## Table of contents

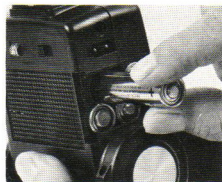
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## Short course of instructions

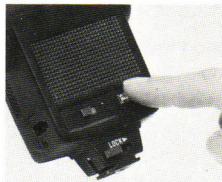
1

Set flash head tilt at 0°, remove Battery Compartment Cover and insert four AA 1.5V alkaline batteries (see page 4).



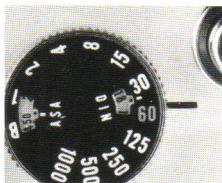
2

Flash unit 5 times to form capacitor (see page 5).



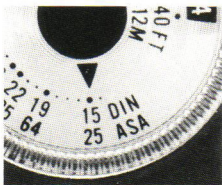
3

Set camera to correct shutter speed for electronic flash.



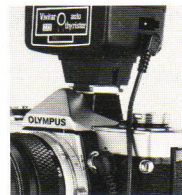
4

Set film speed on Calculator Dial (see page 8).



5

Mount flash on camera. Attach Shutter Cord to flash unit and 'X' terminal on camera (see page 6).



6

Set flash head tilt to the desired shooting angle (see page 9).



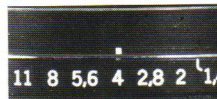
7

Set Mode Selector to the color that provides the automatic operating range or depth of field you desire (see page 7).



8

Set camera lens to the f-stop indicated on the Calculator Dial above the mode color you selected (see page 8).



9

Slide the On-Off Switch (5) to the RED ('ON') position. Focus camera. Take the picture after the Ready Light glows.





## Battery operation

1

Set the flash head tilt to 0° and remove the Battery Compartment Cover (4) by sliding it away from the body of the flash unit.

2

Hold the flash unit with the bottom pointing away from you and insert four AA Alkaline 1.5V batteries in the sequence shown, making sure they are positioned according to the diagrams in the battery compartment.

**CAUTION:** Beware of bargains! Best results and performance to specifications are based on the use of fresh, 1.5-volt *alkaline* batteries.

1 — Insert the first battery in the lower left corner.

2 — Insert the second battery in the lower right corner.

3 — Insert the third battery in the upper right corner.

4 — Insert the fourth battery in the upper left corner.

**NOTE:** If the batteries are not inserted properly, the 273 will not operate.

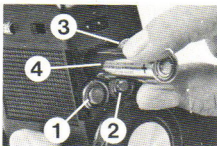
3

To replace the Battery Compartment Cover, align the cover with the body of the flash unit making sure the edges of the cover are in the slots.

Push the batteries into the flash slightly and slide the cover towards the flash unit until it is firmly seated.

### When to change the Batteries —

The batteries should be replaced when the recycle time exceeds 30 seconds or when no sound can be heard when the unit is switched on. It's a good idea to periodically clean



both ends of the alkaline batteries and the contacts inside the battery compartment with a pencil eraser .

## The illuminated calculator dial

Your Vivitar 273 has an Illuminated Calculator Dial (1) which is easily readable in dim light. The dial lights up automatically when the 273 is switched ON and goes out when you turn the unit OFF.

## Forming the capacitor

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

1

Set the Mode Selector (3) to the manual ('M') position.

2

Insert the batteries, and slide the On-Off Switch to the RED ('ON') position; or — plug the optional SB-4 AC Adapter into both the flash and the wall outlet. **NOTE:** The flash's On-Off Switch must be in the 'OFF' position when using the AC Adapter.

3

After the Ready Light glows, fire the flash using the Open Flash Button (6). Repeat this procedure about 5 times allowing the Ready Light to glow 15 to 20 seconds after each flash. With either method your capacitor will then be formed and you are ready to begin shooting.





## Attaching your flash to the camera

1

Move the Mounting Foot Lock Lever (7) all the way to the left (unlock position).



2

Insert the Mounting Foot (8) into the accessory shoe on the camera and tighten by moving the Mounting Foot Lock Lever to the right until it clicks into the 'LOCK' position.

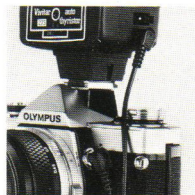


3

If your camera has a hot shoe, it is not necessary to use the Detachable Shutter Cord included with your flash unit. Once attached to the camera, the flash is fully synchronized with the camera through the contacts in the shoe.

4

If your camera does not have a hot shoe, plug the pointed end of the Detachable Shutter Cord (12) into the Shutter Cord Socket (9) on the flash. Plug the other end of the cord into the camera flash terminal marked 'X'. (Refer to your camera instructions for specific information regarding your camera's flash synchronization).



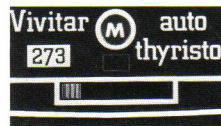
## Automatic operation

### MODE SELECTOR

The Mode Selector (3) on your 273 can be set to four positions allowing you to select 'manual' operation or one of three automatic modes:

#### M (Manual) —

In this position your flash will operate in the manual mode (see page 11).



#### Automatic Modes —

When used for automatic flash photography, the 273's light output varies according to the flash-to-subject distance and reflectivity of the subject. Three different automatic modes are provided to give you control over the depth of field in your photographs. Each mode is color-coded for easy reference:

#### YELLOW —

Utilizes larger lens openings for relatively shallow depth of field. Automatic operating range: 3 to 25 ft. (0.9 to 7.6 m).



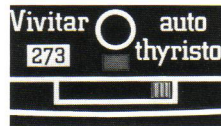
#### RED —

Utilizes medium lens openings for medium depth of field. Automatic operating range: 2 to 18 ft. (0.6 to 5.5 m).



#### BLUE —

Utilizes relatively small lens openings for the greatest depth of field. Automatic operating range: 2 to 13 ft. (0.6 to 3.9 m).



## Shooting automatically

### DIRECT FLASH

1

Set your camera to the correct shutter speed for electronic flash. (Refer to your camera instructions)



2

Set the correct ASA or DIN film speed by turning the Calculator Dial ① until the Film Speed Indicator points to the ASA or DIN of the film you are using (see page 21). The film speed can be found on the film box, cartridge, or on the data sheet that comes packed with the film.



*EXAMPLE:* When using ASA 25 film, turn the Calculator Dial until the Film Speed Indicator points to 25 on the ASA Scale.

3

Set the Mode Selector ③ to the color that provides the automatic operating range or depth of field you desire (see page 7).



4

Set your camera lens to the f-stop indicated on the Calculator Dial above the mode color you selected.



*NOTE:* The correct automatic f-stops for most popular films are listed in the specifications, page 18.

*EXAMPLE:* Using ASA 25 film, shooting direct (tilt at 0°) at a flash-to-subject distance of 10 feet, and desiring maximum depth of field, set the Mode Selector to the blue position, and set your lens to f4.

5

Set the flash head tilt to the 0° (straight ahead) position.



6

Slide the On-Off Switch ⑤ to the RED ('ON') position. Focus camera. Take the picture after the Ready Light glows.

Your flash unit will automatically determine correct exposures within the automatic range for the auto mode you have selected without further f-stop adjustments.

### AUTOMATIC BOUNCE FLASH

Your 273 allows you to bounce light off the ceiling for softer illumination while maintaining the convenience of fully automatic exposure control.

1

Set your camera to the correct shutter speed for electronic flash.



2

Set the ASA (DIN) film speed on the Calculator Dial (see page 8).





### 3

Set the flash head tilt to the desired bounce angle. The adjustable head of the 273 tilts upward 90° from the 0° (straight ahead) position, with click stops at 0°, 45°, 60°, 75° and 90°. (See 'Helpful Hints', page 15).

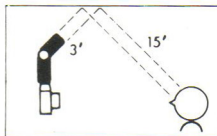


### 4

Set the Mode Selector ③ to the color that provides the automatic operating range or depth of field you desire (see page 7). It is especially important when using bounce flash to make sure the automatic mode you select has an operating range sufficient to cover the entire flash-to-reflector-to-subject distance.



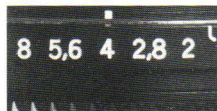
**EXAMPLE:** If you have selected an auto range of 2 to 18 feet (Red Mode), and you are bouncing the flash off the ceiling 3 feet up, then your subject *must be within* 15 feet of the bounce point on the ceiling.



**NOTE:** To ensure properly exposed pictures when bouncing off light-absorbing surfaces (for example, dark or roughly textured ceilings or relatively high ceilings), always use the largest aperture (smallest f-stop number) that still gives you the desired depth of field. This is especially important when using slide film since its exposure latitude is limited.

### 5

Set your camera lens to the f-stop indicated on the Calculator Dial above the mode color you selected.



**NOTE:** The correct automatic f-stops for most popular films are listed in the specifications, page 18.

**EXAMPLE:** Using ASA 25 film, bouncing the light off an average 8-foot ceiling onto a subject 10 feet from the flash, and desiring moderate depth of field . . .

- 1) set the flash head tilt to 45° or 60°
- 2) set the Mode Selector to Red
- 3) set your lens to f2.8

### 6

Slide the On-Off Switch ⑤ to the RED ('ON') position. Focus the camera. Take the picture after the Ready Light glows. Your flash unit will automatically determine correct exposures within the automatic range for the auto mode you have selected without further f-stop adjustments.

## Manual operation

### DIRECT FLASH

Should you wish to use your 273 in the Manual mode (for example, pictures taken beyond the automatic flash range), proceed as follows:

#### 1

Set the Mode Selector ③ to the manual ('M') position.



#### 2

Set your camera to the correct shutter speed for electronic flash.



#### 3

Set the ASA (DIN) film speed on the Calculator Dial (see page 8).



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

Find the flash-to-subject distance on the Calculator Dial Distance Scale, and set your lens to the f-stop indicated above that distance.



*EXAMPLE:* If you are 36 feet from your subject and are using ASA 25 film, set your lens f-stop to f1.4.

6

Slide the On-Off Switch to the RED ('ON') position. Focus camera. Take the picture after the Ready Light glows.

*NOTE:* For rapid sequence flash pictures in the Manual Mode, you may fire your 273 as soon as the Ready Light glows. However, to prevent possible damage to your unit, avoid a continuous series of more than 25 flashes and allow the unit to "rest" for 4 minutes between series.

### MANUAL BOUNCE FLASH

Your 273 can be used off-camera in the manual ('M') mode for bouncing light off walls and reflectors, or on camera for bouncing light off the ceiling at distances beyond the maximum automatic range. White walls, large sheets of paper and even bed sheets make good reflectors.

First set the Mode Selector on the 273 to manual ('M'). To determine the proper exposure when using bounce flash in the manual mode, use any *ONE* of the following methods:

1

In rooms of average size and color, a good general rule is to

open your lens 2 f-stops wider than if you were shooting direct  
OR

2

Find the total flash-to-reflector-to-subject distance on the Calculator Dial and note the f-stop indicated above that distance. Open your lens 1 f-stop wider than indicated on the dial. *Example:* Photographing a subject at a total bounce distance of 20 feet from the flash with ASA 25 film, set your lens to f2.

OR

3

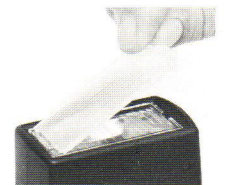
If the total bounce distance does not appear on the Calculator Dial, first measure the distance from the flash to the reflecting surface to the subject. Then, divide that total distance into the flash guide number for the film you are using. Note the resulting number (rounded off to the nearest f-stop), and open your lens 1 f-stop wider.

*EXAMPLE:* Using ASA 25 film at a total bounce distance of 25 feet . . . Guide No. 50 ÷ 25 ft. = 2. Set your lens to f1.4.

*NOTE:* When figuring flash-to-subject distance using bounce flash, be sure to consider the light absorption of the reflecting surface (see 'Automatic Bounce Flash,' page 10).

## Wide angle attachment

Your Vivitar 273 is supplied with a Wide Angle Attachment (Ⓜ) that snaps on the front of your flash as shown. This increases the angle of illumination to a pattern of 65° horizontal and 60° vertical for use with wide angle lenses.





When shooting automatically, no f-stop adjustment is required with this attachment in place. *However, the automatic operating ranges are altered as shown in the Specifications, page 18.* In the manual mode, allow one full f-stop increase in exposure. For example, if the Calculator Dial indicates f11, open your lens to f8.

## Cameras with built-in automatic flash control

Some cameras have a feature which automatically sets the correct lens apertures for flash as you focus. For the camera and your Vivitar 273 to operate properly together, you must:

1

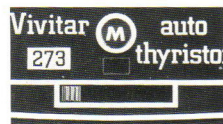
Set the correct flash guide number for the film you are using on the Guide Number Scale of your camera (refer to your camera instructions for the location of the Guide Number Control). The proper flash guide numbers corresponding to both ASA and DIN film speeds are indicated in the Specifications, page 18.

2

Make sure the Mode Selector ③ is set to manual ('M'); and

3

Tilt the flash head to 0° (direct flash).



## After you've finished shooting

### REMOVING THE FLASH —

To remove the flash from the camera, move the Mounting Foot lock Lever ⑦ all the way to the left (unlock position) and slide the flash off the accessory shoe.

### BATTERIES —

A. To conserve battery power, it is recommended that you turn off the unit when there is more than a 2- or 3-minute delay between pictures.

B. If you're not going to use your flash unit for several weeks, or if the batteries appear weak, remove them.

### LET IT GLOW!

Do not flash your 273 before putting it away. Just turn it off. *It's better to leave the Ready Light glowing.* The next time you use it, your flash will 'reform' faster, and its life will be extended.

## Helpful hints

### Bounce flash

Since the total bounce flash distance is usually estimated, and different surfaces have different reflectance characteristics, make sure your subject is well within the operating range for the automatic mode you wish to use. When using your 273 for automatic bounce flash lighting, it is recommended you set the Mode Selector to the YELLOW position (the setting for the widest f-stop) giving you the maximum automatic operating range to work with.

When using color film, best results are obtained by bouncing the light off white or neutral colored surfaces. This is most important with color slide film.

As a general rule when using bounce flash, set the flash head tilt on the 273 so that the light is directed at the midpoint on the ceiling between the flash and the subject.

## Mirrors

Never shoot flash pictures straight into mirrors, glass or other highly reflective surfaces, as the resulting light reflections may ruin your 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.

## 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 one full f-stop. Determine the corresponding flash-to-subject distance for that f-stop. Set your flash at that distance. The flash will then serve as the dominant light source, and the natural light will serve as fill light.

Be sure to set the Mode Selector of your 273 to manual ('M') for simulating sunlight.

## Open flash

This technique involves firing the flash manually while the camera shutter is 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 the shutter and fire several electronic flashes from different positions until you have lit the entire scene.

## Synchronization speed

When taking pictures with your Vivitar electronic flash, always try to use the fastest 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.

## Group shots

When photographing groups of people, bounce lighting gives an even and pleasing coverage of the subject. Arrange the group so that everyone 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. Be sure to move well within the flash range indicated on the Calculator Dial and remember to estimate the *entire* bounce distance if you are using bounce flash.

## Flash fill

Electronic flash can be used outdoors to 'fill-in' shadow areas. It softens hard shadows resulting from bright sunlight and is particularly useful with color slide film, which can record only 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 for a bright fill. For a more normal fill, move the flash back half again the distance; for a weaker fill (not recommended with color slide film) double the bright fill distance.

Set the Mode Selector of your 273 to Manual ('M') for flash fill.

## Vivitar Model 273 Specifications

### Manual Operation

Guide numbers (ASA-Feet):

ASA Film Speed	25	64	80	100	125	160	200	400	800
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Flash Guide No.	50	80	90	100	110	125	140	200	280
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Guide numbers (DIN-Meters):

DIN Film Speed	15	19	20	21	22	23	24	27	30
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Flash Guide No.	15	24	27	30	34	38	43	61	84
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### Automatic Operation

Auto f-stop settings to the closest half f-stop:

Film Speed: ASA	25	64*	80*	100*	125*	160*	200*	400	800
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DIN	15	19	20	21	22	23	24	27	30
-----	----	----	----	----	----	----	----	----	----

YELLOW Mode	2	3.5	3.5	4	4.5	4.5	5.6	8	11
-------------	---	-----	-----	---	-----	-----	-----	---	----

RED Mode	2.8	4.5	4.5	5.6	6.3	6.3	8	11	16
----------	-----	-----	-----	-----	-----	-----	---	----	----

BLUE Mode	4	6.3	6.3	8	9.5	9.5	11	16	22
-----------	---	-----	-----	---	-----	-----	----	----	----

\*These film speeds differ by only 1/3 of an f-stop. The resulting change in exposure is so slight that a change in the Auto f-stop may not be indicated.

*Automatic operating ranges:*

YELLOW Mode, 3 ft. to 25 ft. (0.9 m to 7.6 m)

RED Mode, 2 ft. to 18 ft. (0.6 m to 5.5 m)

BLUE Mode, 2 ft. to 13 ft. (0.6 m to 3.9 m)

*With Wide Angle Attachment:*

YELLOW Mode, 3 ft. to 18 ft. (0.9 m to 5.5 m)

RED Mode, 2 ft. to 13 ft. (0.6 m to 3.9 m)

BLUE Mode, 2 ft. to 9 ft. (0.6 m to 2.7 m)

*Automatic Sensor Measuring Angle:* 20°

### General Specifications

*BCPS (Beam Candle Power Seconds):* 2000 (manual)

*Recycle Times:* DC — 7 seconds (manual); 0.5 to 7 seconds (automatic, depending on flash-to-subject distance)

AC — 5 seconds (with optional AC Adapter)

(When using batteries, recycle times are based on an average of the second through eleventh flashes with fresh batteries. Recycling takes longer as the batteries drain.)

*Flash Duration (approx):*

1/1000 second (manual)

1/1000 to 1/30,000 second (automatic)

*Color Temperature:* 5500° Kelvin

*Angles of Illumination:*

Normal: 45° vertical, 60° horizontal

With Wide Angle Attachment: 60° vertical, 65° horizontal

*Operating Positions:* Vertical mount with variable tilt head

*Power Sources:*

DC — Four AA 1.5V *alkaline* batteries (Mallory MN 1500, Eveready E91, or equivalent)

AC — 120V with Optional AC Adapter

*Flashes per Set of Batteries:*

170 (manual, depending on type of battery used)

170-800+ (automatic, depending on flash-to-subject distance)

*Camera/Electronic Flash Synchronization Connections:*

Shutter Cord, Hot Shoe

*Weight without Batteries:* 10.4 oz. (295 g)

*Dimensions:* 5½" x 3½" x 1½" (133 mm x 89 mm x 43 mm) (less the mounting shoe)

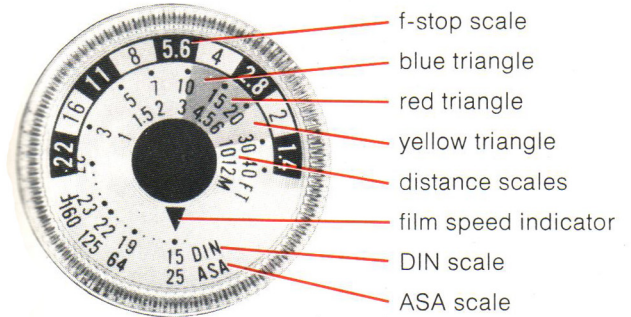
*Accessories Included:* Wide Angle Attachment,

Vivitar PC-1 12" Shutter Cord

*Accessories Available:* Vivitar PC-31 3-foot coiled Shutter Cord, Vivitar Remote Flash Triggers, Vivitar SB-4 AC Adapter

Specifications subject to change without notice





*On the dial:*

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



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