

**How
to use
your**

KODAK *flashholder*

Model 2

**Read before
using the
Flashholder
equipment**

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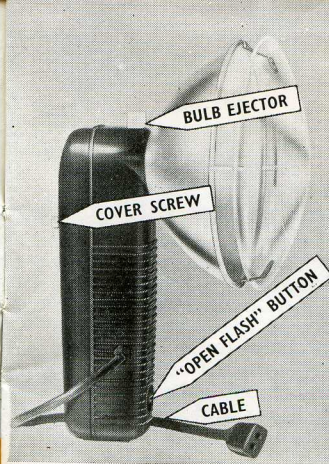
KODAK (AUSTRALASIA) PTY. LTD.



Kodak FLASHHOLDER

Model 2

This versatile Kodak Flashholder can be attached rigidly by means of a Kodak Flashholder Camera Bracket, to any camera with a tripod bush and connected to most flash-synchronised shutters with a Kodak Flashholder Cable. Flashsnaps can then be taken anywhere at any time. Alternatively, in many circumstances, the Flashholder Model 2 can be used without attaching it or even connecting it to the camera.



HOW THE FLASHHOLDER WORKS

When the electrical circuit in the Flashholder is completed, a dry battery housed in the plastic body fires the flashbulb. This gives a single flash of light intense enough to give a well-exposed photograph, and brief enough to stop normal subject move-

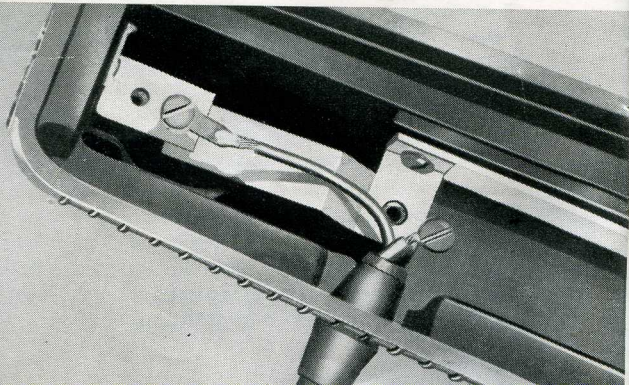
ment. Many modern cameras have flash-synchronised shutters. These have contacts which can be connected to the Flashholder by means of the appropriate cable. When the shutter is operated, internal contacts complete the Flashholder circuit and cause the bulb to fire during the brief time that the shutter is fully open.

With cameras that cannot be connected to the Flashholder, the bulb can be fired independently by pressing the red button at the bottom of the Flashholder, the shutter being opened just before the flash is fired, and closed immediately after.

FITTING THE CABLE TO THE FLASHOLDER

If your camera has flash contacts, your dealer will advise you as to which of the several types of Kodak Flasholder Cable will connect with your camera.

Having selected the right cable, undo the knurled screw in the middle of the back of the Flasholder case, and lift off the back. Remove the two screws shown below. Insert the cable through the hole at the side of the Flasholder and push in the rubber sleeve on the cable until it seats firmly in the hole. Place the screws through the terminal tags on the ends of the cable leads and screw them home. You are then ready to insert the batteries.



FITTING THE BATTERIES

This Flasholder must be fitted with two dry cells, both pointing the same way. Eveready No. 935 batteries are suitable. Cells must be in first-class condition. Unless they are fresh, they are liable to cause bad synchronising, or may even fail altogether to fire the flashbulb. Never keep exhausted batteries in the Flasholder.

To test battery, insert a 6-volt 3-watt cycle headlamp bulb with a miniature bayonet cap in place of a flashbulb. Press the red button of the Flasholder, and if the bulb glows fairly brightly (although not, of course, anything like as brightly as with a 6-volt battery), the battery will fire flashbulbs satisfactorily.

Powered by a miniature deaf-aid 22½-volt battery, the compact and efficient Kodak Flashpack* can be fitted in place of the above batteries. It will fire several hundred more flashbulbs than will two 1.5-volt cells. The Kodak Flashpack must **not** be tested with a cycle headlamp bulb as described.

(* Not currently available in Australia.)



ATTACHING THE FLASHHOLDER TO CAMERA

The Kodak Flashholder Model 2 can be securely fixed, by means of the Kodak Flashholder Camera Bracket, to any hand-camera having tripod bushes. This bracket (see below) has three holes so placed that the Flashholder can be positioned to the best advantage in relation to the camera. Using the knurled-headed screws, attach the bracket by means of one hole to the tripod bush on the camera, and by one of the other holes to the threaded socket in the base of the Flashholder. The tripod can then be screwed to the third hole if required. Bear in mind these points when setting up the Flashholder and camera on the bracket:

- 1 The Flashholder should be positioned so that it does not foul the camera controls.
- 2 It should not obscure the viewfinder.
- 3 It is usually preferable for the Flashholder reflector to be above the level of the camera lens.

See that the connecting cable does not pass in front of the camera lens. This can best be prevented by leading it behind and under the Flashholder Bracket instead of direct from Flashholder to flash contacts. Whichever method of connection is



adopted, see that it does not impose any strain on the cable at the point where it enters the Flashholder or connects to the camera.

The Flashholder can be used without being connected to the camera at all if the 'open flash' method of operation described on page 9 is adopted.



CHOOSING AND USING A FLASHBULB

Connect the Flashholder to the camera before inserting the flashbulb. This obviates any risk of premature firing of the flash. *Make sure the shutter is closed.*

The different types of flashbulb: Use only bulbs with miniature bayonet caps. With a synchronised camera having a variable speed shutter, use flashbulbs with the shutter set to 1/25th second.

With single-speed cameras stated to be synchronised for Class M flashbulbs you can take flashsnaps, night and day, at the 'T' shutter setting. With other single-speed flash contact cameras, set the shutter to 'B' or 'T'. This is necessary in order to keep the shutter open for the duration of the flash. Because the shutter will have to be open longer than for instantaneous photographs, do not use flashbulbs in these circumstances for a daylight picture (see on opposite page) — only at night, or in very weak light. Preferably, use the camera on a tripod or other firm support.

If you are using the Flashholder without any connection to the camera, you can use any bulb with a miniature bayonet cap, provided you set the shutter to 'B' or 'T' and (in quick succession) open the shutter, press the red Flashholder button and close

the shutter. Again, this 'open flash' procedure, as it is called, is only advisable in very poor light and with a firmly supported camera.

Fitting flashbulb and diffusing screen. Unclip the diffusing screen and swing it open. Insert the bulb so that the pins on the cap engage with the slots in the bulb holder. Push it straight in *without twisting*, until it clicks.

Occasionally, a flashbulb may shatter when fired. To guard against this contingency, the diffusing screen must always be securely closed before using the equipment.

After firing, open the diffusing screen, and eject the used bulb by a sideways movement of the lever at the rear of the reflector — be careful, the bulb is hot.

EXPOSURE DETAILS FOR KODACHROME FILM

Please refer to the instruction sheet packed with each film.



REMEMBER — DISTANCE AFFECTS EXPOSURE

(and with fixed-focus cameras at less than 7 ft. use a portrait or close-up lens)

The exposure for flashsnaps depends on the distance between the flashbulb and the subject. This distance will also depend upon the speed of the film, the type of flashbulb, and the setting of the camera controls. But Kodak films have great latitude, and reasonable variations from the exposure tables will usually still produce good pictures. If you find that you cannot get a pleasing composition by standing at the distance recommended in the table, remember that you can stand at half the distance quoted if you drape a double thickness of a white handkerchief over the diffusing screen. Remember, too, that light surroundings increase the effectiveness of a flash, and that you may be able to utilise this fact by standing at more than the distance given, and still get a well-exposed picture.

FOR CAMERAS WITH SINGLE-SPEED SHUTTERS

If synchronised for both Class M and F bulbs use "I" setting with all bulbs.

Flashbulb	Camera Setting	'Verichrome'	'Tri-X'
G.E.C. No. 1	B	5-7 ft.	7-10 ft.
PF.I	B	5-7 ft.	7-10 ft.
PF.14	B	7-10 ft.	10-15 ft.
G.E.C.5 & PF.25	B	10-15 ft.	15-20 ft.

In a small brightly furnished room, either at night or in very dim daylight, keep to the longer camera-to-subject distances. With dark subjects and in dark or large rooms, use the shorter distances.

FOR CAMERAS WITH VARIABLE-SPEED SHUTTERS

Set shutter at 1/25th sec.

VERICHROME

Distance : Flash to subject	G.E.C. No. 1	PF.I	PF.14	G.E.C.5 & PF.25
30 ft.	—	—	f/4.5	f/5.6
20 ft.	f/4.5	f/4.5	f/5.6	f/8
15 ft.	f/5.6	f/5.6	f/8	f/11
10 ft.	f/8	f/8	f/11	f/16
7 ft.	f/11	f/11	f/16	f/22
5 ft.	f/16	f/16	f/22	f/32

TRI-X

Distance : Flash to subject	G.E.C. No. 1	PF.I	PF.14	G.E.C.5 & PF.25
30 ft.	f/5.6	f/5.6	f/8	f/11
20 ft.	f/8	f/8	f/11	f/16
15 ft.	f/11	f/11	f/16	f/22
10 ft.	f/16	f/16	f/22	f/32
7 ft.	f/22	f/22	f/32	f/45
5 ft.	f/32	f/32	f/45	—

For use in small brightly furnished rooms, either at night or in dim daylight. In dark or large rooms use next larger lens aperture (e.g. f/8 instead of f/11). For PANATOMIC-X film use settings as for VERICHROME film.

TAKING FLASHSNAPS INDOORS



Flashsnaps of natural and unrehearsed events can easily be made, but the best pictures are obtained with a little forethought and preparation. Make sure that the background to a portrait does not distract attention from the subject. Unpatterned

wallpaper or curtains are ideal. With a focusing camera, keeping the sitter towards the middle of the room will subdue background detail, as well as darken it.

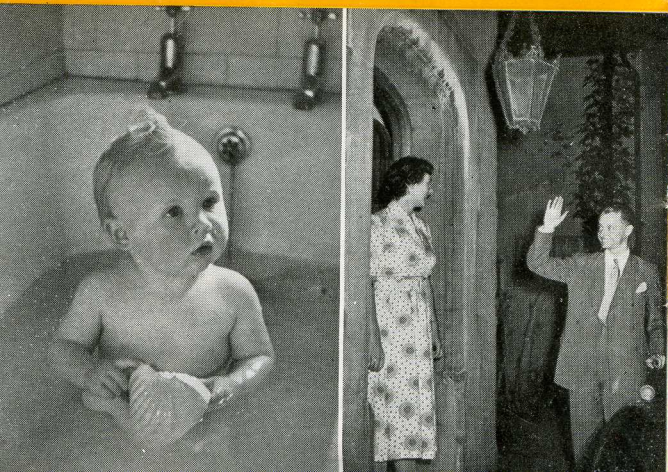
Light-coloured walls and furnishings increase the effectiveness of the flash by reflecting the light, allowing you either to get farther away to include more in the picture, or to use a smaller lens aperture to increase the range of sharp focus. Mirrors and brightly-polished ornaments should be kept out of the picture as they may reflect the full intensity of the flash back into the camera lens.

When there is other artificial lighting or daylight, only instantaneous exposures are advisable. Use flashbulbs at 1/25th second shutter speed. With single-speed cameras set shutter at 'T' only if the camera is stated to be synchronised for both F and M classes of bulb. At this setting, normal subject movement can be stopped; moreover, the camera can be held in the hand.

Using single-speed shutter cameras, with flashbulbs as the sole source of light, pictures can be made only by the 'open flash' method. But if there is any additional lighting, this method might cause blurring if the subject moves rapidly, or if the camera is not firmly supported. Although a tripod is the best way of ensuring a steady camera, it is not indispensable, and you can use a table or other firm support.

OUTDOOR FLASHSNAPS AT NIGHT

Almost any night time event is within the scope of even the simplest camera, using Kodaak TRI-X film. Photograph at half the distances set out in the tables (or at two stops larger lens aperture, e.g. f/5.6 instead of f/11). With single-speed, fixed aperture cameras, use PF.14, PF.25 and G.E.C. No. 5 bulbs for outdoor night flashsnaps, as they give more light than G.E.C. No. 1 and PF.1 bulbs. If your camera is not synchronised for Class M bulbs, set the shutter to 'B' or 'T', and only if there is other normal lighting is it necessary to support the camera rigidly.



FLASHSNAPS IN DAYLIGHT

The Kodak Flashholder Model 2 has its uses even on the brightest summer day. With the sun at the side (or above) and slightly to the rear of your subject, a shadow will be thrown over the face. Flash helps to relieve the shadows of the brightly but unevenly-lit picture, and can give much more pleasing results.

The exact effect will depend on getting the balance between sunlight and flashlight. As a general rule, stand at the same distance from camera to subject as is specified in the tables on pages 10 and 11. Alternatively, if working at this distance makes the subject appear too small, keep to half the distance given in the table, but *dim down the flash by draping the double thickness of a white handkerchief over the diffusing screen.* You can also use the Flashholder at the same distance to augment any weak daylight.

In daylight the simpler cameras must be set to 'T' to prevent movement and over-exposure, so PF.1, PF.14, PF.25 or G.E.C. No. 5 flashbulbs can only be used for these 'synchro-sunlight' photographs with cameras synchronised for Class M bulbs (variable-speed cameras must be set to 1/25th second).

Flashholder Cables and Shutter Settings for Kodak and Brownie Cameras.

Camera	Cable Type	Shutter Setting
Brownie 127—Not suitable for Flash Photography		
Six-20 Brownie C	—	'B'
Six-20 Brownie D, E or F (see below)	B	'B'
Brownie Cresta	J	'I'
Duaflex*	—	'B'
Six-20 Kodak Junior I	—	'B'
Six-20 Kodak Junior II	J	1/25
Sterling	J	1/25
Six-20 Kodak A	A	1/25
Retina and Retinette	J	Any Speed

Six-20 Brownie D, E & F—Some cameras of these types contain a yellow transfer stating that the shutter is synchronised for both Type F and Type M flash bulbs. Such cameras can be used at the "I" (instantaneous) shutter setting for flash photography if preferred to the 'B' setting.

**Kodak Duaflex Camera has built-in flash contacts but uses a special Flashholder not currently available in Australia. For other cameras, check your Kodak Dealer or Kodak store for recommended cable, flash bulbs and shutter settings, or refer to the instruction book supplied with the camera.*