

LIGHTING

The Exakta's Synchronization for Flash Photography

All Exakta cameras, including the Vest-pocket and $2\frac{1}{4} \times 2\frac{1}{4}$ models, are internally synchronized for regular flash photography. The highly polished flash contact sockets (two holes) are to the left of the lens (when you face the camera lens).

(Some of the older model Exaktas have a third, black-rimmed hole above these two sockets. This was needed to support the bracket of a midget flashgun formerly manufactured by Ihagee. The flashgun was discontinued some time ago.)

The Exakta's regular flash synchronization is set so the shutter begins to open 16 milliseconds after you press the shutter release. The 16-millisecond delay is necessary because most flashbulbs do not begin to reach their peak (of light intensity) until that time has elapsed. The delay causes the shutter to open at just the right time, when the maximum light is available.

Since the Exakta has a focal plane shutter, it is advisable to use focal plane bulbs (which are designed for such shutters) to obtain best results. G. E. and Westinghouse #6 and 31 and Sylvania #26 and 2A are recommended. These bulbs are suitable because they have an unusually long and even flash during the time it takes the shutter slit to cover the film frame.

(The Exakta's focal plane shutter is made up of two curtains, which move from left to right when the shutter is released. Exposure time is regulated by the width of the variable slit between the two curtains.)

Experience has shown that other bulbs (Class M) with the same time delay and with a more or less long peak of light can be used successfully up to 1/500 of a second. However, with Class M bulbs, satisfactory results in most cases depend upon the photographer's skill and judgment. If you intend to use such bulbs, it is recommended that you take some preliminary test shots under conditions similar to the ones that will exist when you take your final shots.

Regular flash synchronization with the Exakta is as simple as it is with any other camera. A few precautions must be taken, however:

- 1). Contact plugs of flashguns other than those designed for the Exakta may damage the synchronization and other internal mechanisms.. All flashguns supplied by the Exakta Camera Company come with a one-piece plug, the prongs of which are rigid, properly and permanently spaced. If you already have a flash unit which has a terminal consisting of two separate pins, it is recommended that you use a Security Intermediate Plug. This is merely a combined plug and socket. The socket side accepts the two pins of the flashgun cord, while the plug side has the two pins, rigidly and properly spaced, which are plugged into the camera sockets.

2). The shutter must be cocked before you plug the flashgun into the camera or insert a flashbulb. This must be done each time. If you do not, the bulb will go off immediately.

3). If the flash mechanism does not synchronize properly, it is possible that the contacts are out of order. The camera should be checked. Before doing so make certain that the flashgun is in order electrically. Check to see that the contacts of the batteries, bulbs and midget adapter (if one is used) are not corroded or damaged. Occasionally, a run of bulbs is faulty and goes through the manufacturer's plant without being caught. If you get such bulbs, your camera and flash equipment may be in fine working order but the bulbs will not fire. Therefore, it is a good idea to check one of your bulbs on another gun to make certain it will fire. Many photographers carry a piece of sandpaper with which they can scrape the end of each bulb before inserting it in the flashgun and thereby assure perfect contact.

4). When using extensions or special solenoids, the electrical load should not exceed 2 amperes, the Exakta's maximum capacity.

The latest Exaktas--models V and VX--are not only synchronized for regular flashbulb photography but also for electronic flash. The electronic flash contacts are the sockets to the right of the lens.

The electronic flash mechanism operates without any delay after the shutter has been released. When using electronic flash, the shutter of the camera should be set at 1/25 or 1/50 of a second. At these settings, the film frame is uncovered fully (the shutter slit is open at its widest) for 6 milliseconds, thus providing sufficient time for the electronic flash to record on the film.

(Exakta V and VX owners will be interested in knowing that bulbs with a 5-millisecond delay--the SM and SF can also be used at speeds of 1/25 and 1/50 of a second when the flashgun cable is plugged into the electronic flash contact sockets. This is of great importance in color photography because Kodachrome exposes evenly when shot at 1/50 of a second with SM or SF bulbs off the electronic flash sockets).

There are many kinds of electronic flash units on the market and their time delay ratings vary. Before a unit is purchased, it is advisable to check to make certain that the time delay of the unit and the Exakta correspond.

The simplest procedure for electronic flash photography is to use the Exakta V or VX with an electronic unit that has zero delay. Before purchasing the unit make certain that it actually has no time delay. Some dealers are not too familiar with this phase of photography and cannot give you adequate information. The literature that accompanies the unit should be read carefully, or the factory contacted to ascertain the time delay.

Even if the electronic flash unit is not equipped to provide a zero delay flash, it may still be usable. A unit with a delay of up to 5 milliseconds can be used with the Exakta V or VX in the usual way, connected to the electronic flash sockets of the camera. A unit with a time delay of 16 to 20 milliseconds can be used with any Exakta model if the flashgun cord is plugged into the regular flash contacts (on the left side of the camera) instead of the electronic flash contacts. When used in such a manner, however, the electronic flashgun may be difficult, or even complicated, to adjust and the process may require considerable time and patience.

The precautions (1 to 4) for regular flash (on page 1) also pertain to electronic flash.