

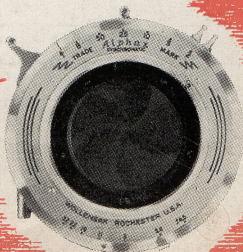


Wollensak
MASTERPIECE



SHUTTERS

**WITH AND WITHOUT
SYNCHRONIZATION**



THE SHUTTER FOR FLASH PHOTOGRAPHY

Wollensak ... RAPAX SYNCHROMATIC

RAPAX FULL SYNCHROMATIC

Here is completely automatic synchronization for X-type electronic high-speed lamps, *plus* automatic synchronization of Class M (20 millisecond) and Class F (5 millisecond) lamps.

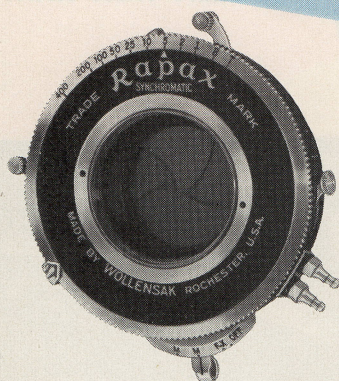
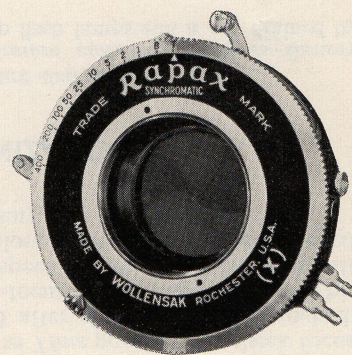
Easy-to-read, easy-to-set scale at bottom of shutter provides selection for proper delay for each class of lamp. Black "M" setting synchronizes Class M lamps at shutter speed settings of 100 and faster (marked in black); red "M" and red "F" with Class M and F lamps respectively at shutter speed settings of 50 and slower (marked in red); black "X" setting with "X" type (zero delay) electronic high-speed flash units at any shutter speed setting.

Cocking shutter automatically cocks synchronizer as well. This automatic action greatly simplifies flash photography and avoids fatal neglect to cock synchronizer.

RAPAX "X" SYNCHROMATIC

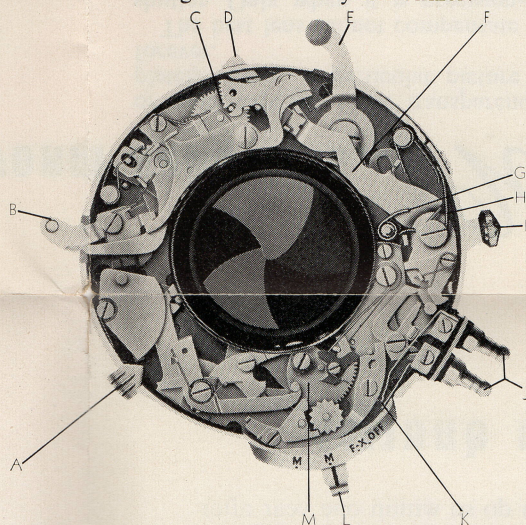
This shutter offers built-in electrical contacts for flashing "X" type electronic high-speed lamps at any shutter speed (also known as trigger type, "O" type and thyatron trigger type). For ordinary flash lamps, Rapax "X" Synchromatic is operated with solenoid.

Simple to use with high speed lamps, Rapax "X" Synchromatic cord connects circuit of flash unit with contact posts on shutter. When shutter is tripped, built-in contacts automatically close to synchronize lamp at any shutter speed. Both contacts are insulated, eliminating polarity requirements.



CONSTRUCTION DETAILS

- A. Diaphragm indicator
- B. Release lever
- C. Retarding mechanism
- D. Cable release bearing
- E. Setting lever
- F. Main lever
- G. High-speed spring
- H. Main spring
- I. Press-focus lever
- J. Synchronizer Bi-post
- K. Synchronizer contacts
- L. Synchronizer delay indicator
- M. Synchronizer delay mechanism



RAPAX NON-SYNCHROMATIC

Your present flash equipment for solenoid synchronization can be used with this shutter for excellent results. Except that it has no internal synchronizer, this shutter is identical to Rapax Synchromatics described in this folder.

SPECIFICATIONS

Size	Maximum Diaphragm Opening		Lens Mount Thread Diam.		Speeds	Flange Diameter	
	Inch	mm	Front Inches	Rear Inches		Inside Inches	Outside Inches
0	1 1/8	17.2	7/8	7/8	1/2 to 1/400 plus T & B	1 1/8	1 3/4
1	3/4	20	1 1/8	1 1/8	1 to 1/400 plus T & B	1 3/8	1 7/8
2	1	25.4	1 1/4	1 1/4	1 to 1/400 plus T & B	1 7/8	2 1/8
3	1 1/4	31	1 3/4	1 3/4	1 to 1/200 plus T & B	1 7/8	2 3/4

Wollensak SHUTTERS FOR LONGER FOCUS LENSES

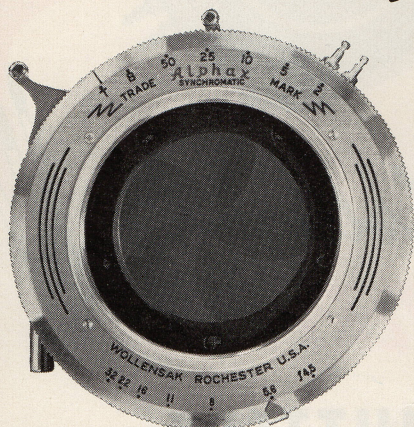
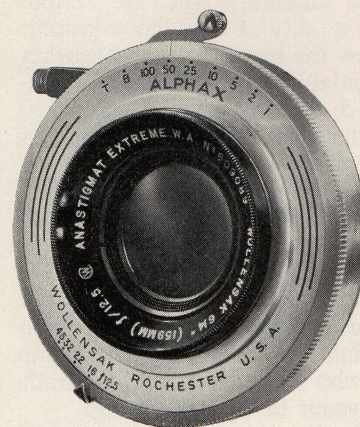
ALPHAX SYNCHROMATIC

Professional photographers welcome the reliability, convenience, and compactness of internal synchronization offered by Nos. 2, 3, 4 and 5 Alphax Synchromatics. Built-in mechanism assures positive automatic synchronization of any popular type flash lamp.

Simple as operating a box camera . . . there's no cocking lever to bother with. Depress operating lever by hand or cable release; lamp flashes in automatic synchronization with shutter to take the picture.

ALPHAX NON-SYNCHROMATIC

This standard Alphax fills the needs of those who do not use flash lamps. Except that it does not have built-in synchronization, this shutter is identical to Alphax Synchromatic shutters.

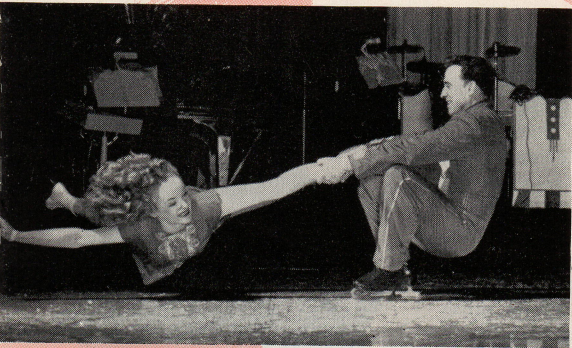


ALPHAX SHUTTERS

Size	Maximum Diaphragm Opening		Lens Mount Thread Diameter		Flange Diameters		Type of Shutter	Speeds	Synchronized Speeds With		
	Inch	mm	Front Inches	Rear Inches	Inside Inches	Outside Inches			Class M	Class F	Class X
0	1 1/8	14	1 1/8	1 1/8	1 1/8	1 3/4	Alphax Non-Sync	1/2 to 1/400 plus T & B	1/25 and slower	All speeds	.....
0	1 1/8	14	1 1/8	1 1/8	1 1/8	1 3/4	Alphax Sync	1/2 to 1/200 plus T & B	.....	.....	.....
1	3/4	18.7	1 1/8	1 1/8	1 1/8	1 7/8	Alphax Non-Sync	1 to 1/200 plus T & B	1/25 and slower	All speeds	.....
1	3/4	18.7	1 1/8	1 1/8	1 1/8	1 7/8	Alphax Sync	1 to 1/200 plus T & B	.....	.....	.....
2	1	25.4	1 1/4	1 1/4	1 1/4	2 1/8	Alphax Non-Sync	1 to 1/100 plus T & B	1/50 and slower	All speeds	All speeds
2	1	25.4	1 1/4	1 1/4	1 1/4	2 1/8	Alphax Sync	1 to 1/100 plus T & B	.....	.....	.....
3	1 1/4	34.9	1 3/4	1 3/4	1 3/4	2 3/4	†Alphax Non-Sync	1 to 1/100 plus T & B	.....	.....	.....
3	1 1/4	34.9	1 3/4	1 3/4	1 3/4	2 3/4	†Alphax Sync	1 to 1/100 plus T & B	1/50 and slower	All speeds	All speeds
4	1 1/2	42.7	2 1/8	2 1/8	2 1/8	3 1/8	†Alphax Non-Sync	1 to 1/50 plus T & B	.....	.....	.....
4	1 1/2	42.7	2 1/8	2 1/8	2 1/8	3 1/8	†Alphax Sync	1 to 1/50 plus T & B	All speeds	All speeds	All speeds
5	2 1/8	56.7	2 3/4	2 3/4	2 3/4	4 1/8	†Alphax Non-Sync	1/2 to 1/50 plus T & B	.....	.....	.....
5	2 1/8	56.7	2 3/4	2 3/4	2 3/4	4 1/8	†Alphax Sync	1/2 to 1/50 plus T & B	All speeds	All speeds	All speeds

†Available upon request with press-focus lever at additional cost.

THE SHUTTER FOR UNIFORM EXPOSURE . . . *Wollensak* PRECISION-MADE RAPAX



WHY YOU NEED A PRECISION-MADE SHUTTER

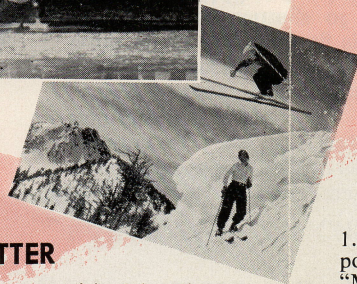
Because the camera shutter has a critical bearing on your picture-making results, it's essential to choose that shutter with care. Like a fine watch that accurately measures time in seconds, so the camera shutter must also measure time intervals in accurate *fractions* of seconds. Set for any given speed, the shutter must maintain that speed every time it opens. When timing is not uniform, negatives will be over

or under-exposed. Color transparencies may be completely ruined, a particular picture opportunity lost forever.

The best lens cannot compensate for an unreliable shutter. Only when it is precision-made, by skilled craftsmen, can you expect uniform accuracy in exposure time, a vital factor in quality photography.

WHY YOU'LL WANT A RAPAX

Accuracy . . . dependability . . . easy operation . . . enjoy these benefits with a Wollensak Rapax shutter—proven superior in nearly every field of photography. This between-the-lens, rim-set shutter has accurately fitted train of gears and pinions coordinated with a series of levers and carefully tempered springs. Speeds range from 1 second



ADVANTAGES OF RAPAX INTERNAL SYNCHRONIZATION OVER SOLENOID SYNCHRONIZATION

1. *Maximum efficiency over entire shutter range*—made possible by use of two synchronizer delay settings. Black "M" setting covers shutter speeds of 1/100 and faster; Red "M" setting covers 1/50 and slower. Maximum synchronization efficiency is not possible at 1/50 second when shutter is synchronized for speeds faster than 1/100, regardless of whether synchronizer device is internal or external.

2. *Action is consistent and reliable*—mechanical synchronizer delay system is independent of condition of batteries in gun, whereas external synchronization varies with condition of batteries, solenoids, associate circuit of cords and

up to 1/400 second, with Bulb and Time settings.

Two operating levers simplify use. Setting lever "cocks" shutter, putting springs under proper tension for desired speed. Depress release lever to make exposure. Cable release socket is also provided.

PRESS-FOCUS LEVER FOR FAST GROUND-GLASS FOCUSING

Shutter blades can be opened for focusing without revolving speed ring to *Time* position. To check focus before exposure and after shutter has been cocked, simply depress press-focus lever to open blades. This can be done at any speed setting. After focusing, lift press-focus lever to close blades. Shutter is still cocked and ready for exposure.

sockets, and temperature changes.

3. *Internal synchronization conserves batteries*—Battery current is used only to flash lamps and is not drained by solenoid coil.

4. *Permits "off-the-camera" flash shots*—shutter is tripped from gun held away from camera for better lighting effects. With some flash guns, such as the new Graflite, solenoid can act as remote tripper only, letting internal shutter synchronizer provide synchronization.

5. *Commercial BC flash circuits* can be used with internal synchronization without harm to contacts.

Wollensak MEANS UNIFORM QUALITY

Professionals, commercial photographers and amateurs who are serious about the quality of their photographic work know the importance of accuracy and dependability in a shutter. Wollensak skilled craftsmanship assures you of the consistent uniformity in quality of Rapax shutters.

Behind the Wollensak guarantee of quality are such factors as their more than fifty years of experience in manufacturing photographic products . . . quality control and rigid inspection throughout production . . . highest quality materials . . . skilled craftsmanship by men who have learned their trade through years of apprenticeship . . . accurate testing of every product before it leaves the factory.

It's no accident that Wollensak products enjoy a reputation for outstanding quality and dependability. When you buy photographic equipment, look for the name *Wollensak* . . . your guarantee of fine performance.

ONE-YEAR GUARANTEE

Wollensak shutters are warranted to give satisfaction. If with proper care

they fail to do so within one year after leaving our factory, repairs will be made free of charge if returned *directly to the factory*.

ADVISORY SERVICE

Consult your Wollensak dealer for information and demonstration of any Wollensak product. For optical or shutter problems which he is not equipped to answer, write to our Service Department. We will be happy to give your queries our prompt attention, without obligation.

Wollensak
MEANS FINE LENSES

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LPHA PHOTO PRODUCTS, Inc.
TWinoaks 3-1436
120 Broadway - Oakland 12, Calif.