

# GRAFLEX®

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## SHUTTER

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## OPERATING

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## INSTRUCTIONS

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PRECISION**

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## THESE INSTRUCTIONS DESCRIBE OPERATION OF MOST SHUTTERS AVAILABLE FOR GRAPHIC® CAMERAS

### INFINITY STOPS

Infinity stops must be located to match the focal length of each specific lens used on the camera. True focus for infinity and other distances is best established by being able to rack forward for all distances.

### LENS FITTING

Lens and shutter combinations can be mounted on suitable lensboards by your local Service Dealer or Graflex Service Center. When used on a Pacemaker® or Super Graphic® Camera the lens must be measured optically for exact focal length so a matching rangefinder cam can be supplied. Be sure to identify and record each lens, its matching cam, and infinity stop positions for future reference.

### LENSBOARD INTERCHANGEABILITY

Pacemaker Graphic and Super Graphic Lensboard assemblies can be interchanged. However, if the Pacemaker Graphic Lensboard is used on a Super Graphic Camera, the electrical features of the camera cannot be utilized. Rangefinder cams are not interchangeable and must be matched to each lens. To fit the Super Graphic Lensboard to the Pacemaker Camera loosen the knurled nut, or nuts, on the back of the lensboard. Turn the fittings away from the contact post, or posts, and retighten the nuts to make the lensboard assembly light tight. Attach connecting cords directly to the shutter contact flash fittings.

## GRAPHEX® SHUTTER • All Sizes

**SHUTTER SPEEDS:** Knurled Ring (5). Revolve until desired speed setting number is located over the index arrow head. Extra resistance of the booster springs will be noted when setting for 1/400th second.

**COCK:** Lever (6). Move to the right for all speeds, including B and T settings.

**TRIP:** Lever (1). Press down.

**B setting**—Shutter stays open as long as trip lever is held down.

**T setting**—Shutter opens when trip lever is pressed down and must be pressed down again to close.

**PRESS FOCUS:**

**Cock**—Lever (6). (Any speed setting.)

**Open**—Lever (7). Pull down on lever.

**Close**—Lever (7). Lift up. Shutter remains cocked.

**Note:** Some shutters have an in-out lever action.

**DIAPHRAGM SETTING:** Lever (8). Set opposite f-number desired.

**CABLE RELEASE:** Threaded Boss (2). Attach straight tip cable release.

**FLASH CONNECTION:** Connector Bi-Post (4). Attach suitable Grafite® Connecting Cord.

**SYNCHRONIZATION:**

**GRAPHEX® FULL SYNC SHUTTER**

**Electronic Flash**—Lever (3). Set at F-X.

**M2 Bulbs**—Lever (3). Set at red M and use red shutter speeds only.

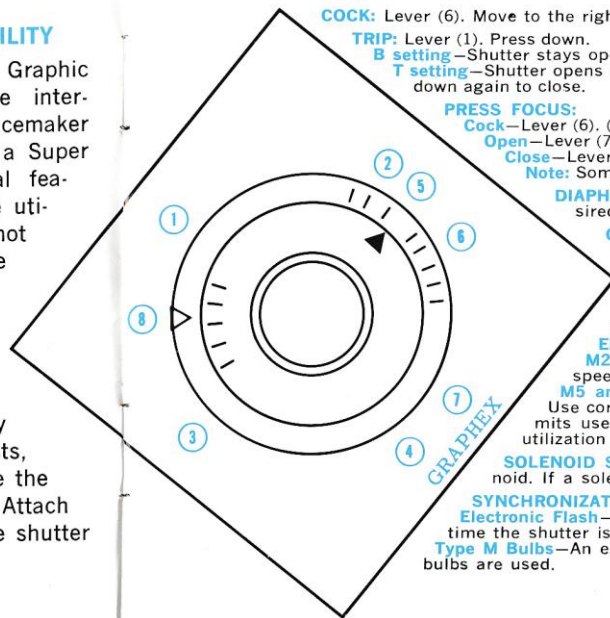
**M5 and Type M Bulbs**—Lever (3). Set at black or red M. Use corresponding black or red shutter speeds only. This permits use of slightly higher guide numbers because of better utilization of bulb output at lower speeds.

**SOLENOID SYNC:** This shutter can be synchronized with a solenoid. If a solenoid is used, lever (3) must be set at OFF.

**SYNCHRONIZATION—GRAPHEX® (X) SHUTTER**

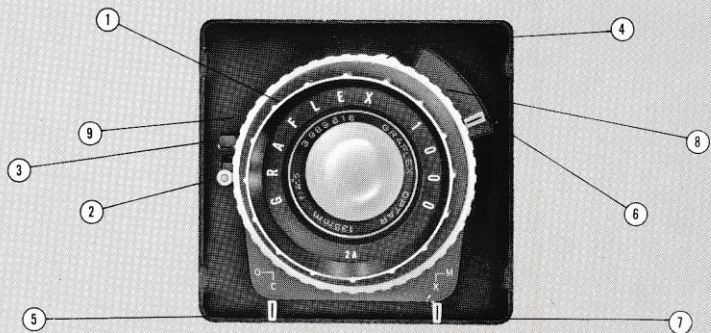
**Electronic Flash**—No setting required. Internal contacts operate every time the shutter is cocked and tripped.

**Type M Bulbs**—An externally synchronized solenoid is required if Type M bulbs are used.



# GRAFLEX® 1000 SHUTTER

The Graflex® 1000 Shutter presents a completely new and modern concept in shutters. Therefore, operating procedures differ from those associated with conventional shutters. It is important to become thoroughly familiar with the shutter if the full capabilities of the camera are to be realized. The instructions appearing on the opposite page should be followed carefully. Controls are visible from the top of the camera and can be identified and set by touch. Except as noted, there is no special operating sequence which must be followed.



**SHUTTER SPEEDS:** Shutter Speed Ring (4). Turn until the dot on the raised knurl is opposite the desired speed setting on the shutter speed scale.

**COCK:** Ribbed Cocking Ring (1). Turn clockwise as far as possible. Unless fully cocked the shutter cannot be tripped.

**Note:** The cocking ring also acts as a sunshade. If it is turned part way and allowed to return to its original position, the shutter blades will not open accidentally.

**TRIP:** by any of the following methods:

- Press the release button at the top left side of the Super Speed Graphic® Camera.
- Press the switch on the back of the Graflite® Battery Case.
- Use a cable release attached to the tapped boss (3) located above the shutter release lever (2).
- Press the release lever (2) at the side of the shutter.

## PRESS FOCUS:

### A. Quick focus and composition check.

Control Lever (5). Move to 0 position fully opening shutter blades and diaphragm leaves. To close, move lever (5) to C position.

### B. Focus while adjusting diaphragm setting.

Shutter Speed Ring (4). Move to 0 position on the shutter scale (9). Cock shutter and trip. The shutter will remain open and the diaphragm will remain at any preselected

setting. Adjust the diaphragm for desired depth of field. To close the shutter move the shutter speed ring (4) off the 0 setting to the desired speed setting and recock the shutter. **Do not recock the shutter before moving of the 0 shutter speed setting.**

**DIAPHRAGM SETTING:** Lever (6). Set to the desired number on the diaphragm scale (8).

**BULB AND TIME EXPOSURES:** Attach a locking type cable release to the tapped boss (3). See shutter speed ring (4) at B.

## SYNCHRONIZATION:

Connecting cords should be attached to the fitting at the right side of the camera body.

**A. Type M Bulb—M-X Lever (7).** Set at M automatically synchronizing the shutter for M type bulbs (20 ms delay) at all speeds from 1/2 sec. to 1/750 sec.

**Note:** The 1/1000 sec. setting is not synchronized for Type M Bulbs.

**B. Electronic Flash—M-X Lever (7).** Set at X. Do not use a shutter speed faster than the flash duration of the unit being used as part of the useful light output of the unit will be cut off during the time differential between the excessive shutter speed and the light output duration.

**FILTERS:** Ribbed Cocking Ring (1). Unscrew by turning counterclockwise. Place the filter into the exposed recess and screw the ring (1) back into place. Use Series 6 filters.

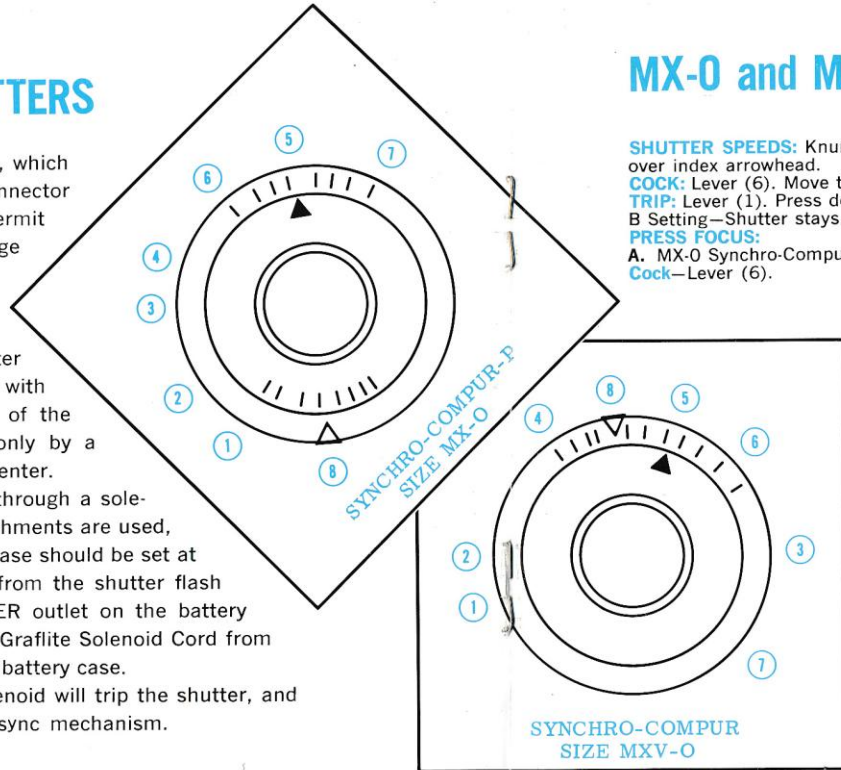
## SYNCHRO-COMPUR SHUTTERS

The MX-1 Graphic Synchro-Compur Shutter, which has the M Sync position nearest the flash connector can be synchronized with a solenoid to permit use of M5 and Type M Bulbs. Lever 3 (page 9) must be set in the X position. This shutter has a top speed of 1/400th second.

If M5 or Type M Bulbs are used with any other Synchro-Compur Shutter, the shutter must be modified to permit synchronization with a solenoid. Modification involves removal of the M sync gear train and should be done only by a Graflex Service Dealer or Graflex Service Center.

The shutters can be tripped by remote through a solenoid without modification. When flash attachments are used, the selector switch on the Graflite Battery Case should be set at one (1). Connect a Graflite Shutter Cord from the shutter flash connection on the camera to the SHUTTER outlet on the battery case, or other flash equipment. Connect a Graflite Solenoid Cord from the solenoid to the SOLENOID outlet in the battery case.

When the trip button is pressed the solenoid will trip the shutter, and the flash unit will be fired by the shutter sync mechanism.



## MX-O and MXV-O SYNCHRO-COMPURS

WITH 1/500 TOP SPEED

**SHUTTER SPEEDS:** Knurled Ring (5). Revolve until desired speed setting number is located over index arrowhead.

**COCK:** Lever (6). Move to the right for all speeds, including B setting.

**TRIP:** Lever (1). Press down.

B Setting—Shutter stays open as long as trip lever is held down.

**PRESS FOCUS:**

A. MX-O Synchro-Compur P

Cock—Lever (6).

**Open**—Press Focus Button (7). Press toward rear of shutter and hold as shutter is tripped.

**Close**—Press Focus Button (7). Pull toward front of shutter to release shutter blades.

B. MXV-O Synchro-Compur

Press Focus Lever (7). Move to the maximum upward position to open shutter blades. Close by moving to the low position.

**DIAPHRAGM SETTING:** Lever (8). Set opposite the f-number desired.

**CABLE RELEASE:** Threaded Boss (2). Use tapered tip type cable release.

**FLASH CONNECTION:** Connector Boss (4). Attach a Graflite® Connecting Cord with a DIN or PC connector fitting.

**SYNCHRONIZATION:**

**Electronic Flash**—Lever (3). Set at X.

**M2 Bulbs**—Lever (3). Set at X. Use shutter speeds of 1/30 sec. or slower.

**M5 and Type M Bulbs** Lever (3). Set at M. All speeds are synchronized.

**SOLENOID SYNC:** Refer to Page 6.

**SELF-TIMER:** MXV-O SYNCHRO-COMPUR ONLY

Cock shutter, lever (6). Set lever (3) at V. Trip shutter, lever (1). The shutter will open automatically in 8-12 seconds. At the V setting, flash synchronization obtained will be the same as at the X setting.

## MX-00 SYNCHRO-COMPUR

WITH 1/500 TOP SPEED, EXTREME W.A. LENSES

**SHUTTER SPEEDS:** Knurled Ring (5). Revolve until index arrowhead on ring points to the desired speed setting.

**COCK:** Lever (6). Move to right for all speeds, including B setting.

**TRIP:** Lever (1). Press down.

**B setting**—Shutter stays open as long as trip lever is held down.

**PRESS FOCUS:** None. To focus on the ground glass, a locking type cable release should be used. Set the shutter speed at B. Cock the shutter and trip through the cable release, using the locking feature of the cable release to hold the shutter open.

**DIAPHRAGM SETTING:** Lever (7). Movement will move the index pointer (8) to the desired f-number.

**CABLE RELEASE:** Threaded Boss (2). Use tapered tip type cable release.

**FLASH CONNECTION:** Connector Boss (4). Attach a Graflite® Connecting Cord with a DIN or PC fitting.

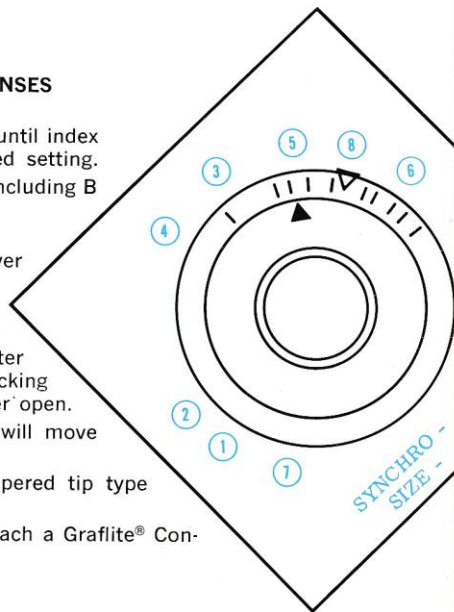
### SYNCHRONIZATION:

**Electronic Flash**—Lever (3). Set at X.

**M2 Bulbs**—Lever (3). Set at X. Use shutter speeds 1/30 sec. or slower.

**M5 and Type M Bulbs**—Lever (3). Set at M. All speeds are synchronized.

**SOLENOID SYNC:** Refer to Page 6.



## MX-I GRAPHIC® SYNCHRO-COMPUR

WITH 1/400 TOP SPEED, ASA BAYONET FITTING

**SHUTTER SPEEDS:** Knurled Ring (5). Revolve until desired speed setting is located above the index mark on the face of the shutter.

**COCK:** Lever (6). Move to right for all speeds, including B and T settings.

**TRIP:** Lever (1). Press down.

**B setting**—Shutter stays open as long as the trip lever is held down.

**T setting**—Shutter stays open as long as the trip lever is pressed down and must be pressed again to close.

### PRESS FOCUS:

**Cock**—Lever (6).

**Open**—Press Focus Button (7). Depress.

**Close**—Press Focus Button (7). Lift up.

**DIAPHRAGM SETTING:** Lever (8). Set opposite the f-number desired.

**CABLE RELEASE:** Threaded Boss (2). Use tapered tip type cable release.

**FLASH CONNECTION:** Connector Boss (4). Attach a Graflite® Connecting Cord with an ASA bayonet type fitting.

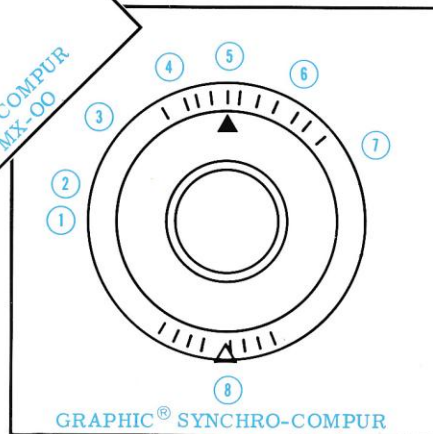
### SYNCHRONIZATION:

**Electronic Flash**—Lever (3). Set at X.

**M2 Bulbs**—Lever (3). Set at X. Use shutter speeds of 1/30 sec. or slower.

**M5 and Type M Bulbs**—Lever (3). Set at M. All speeds are synchronized.

**SOLENOID SYNC:** Refer to Page 6.



# MX-1 SYNCHRO-COMPUR

WITH 1/400 TOP SPEED, SELF-TIMER, DIN FITTING

**SHUTTER SPEEDS:** Knurled Ring (5). Revolve until desired speed setting is located above the index mark on the face of the shutter.

**COCK:** Lever (6). Move to the right for all speeds, including B and T settings.

**TRIP:** Lever (1). Press down.

**B setting**—Shutter stays open as long as trip lever is held down.

**T setting**—Shutter stays open when trip lever is pressed down and must be pressed down again to close.

## PRESS FOCUS:

**Cock**—Lever (6).

**Open**—Press Focus Button (7). Depress.

**Close**—Press Focus Button (7). Lift up.

**DIAPHRAGM SETTING:** Lever (8). Set opposite the f-number desired.

**CABLE RELEASE:** Threaded Boss (2). Use tapered tip type cable release.

**FLASH CONNECTION:** Connector Boss (4). Attach a Graflite® Connecting Cord with a DIN or PC fitting.

## SYNCHRONIZATION:

**Electronic Flash**—Lever (3). Set at X.

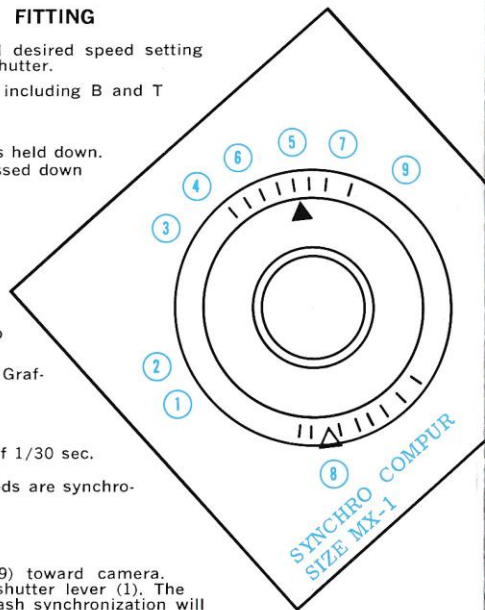
**M2 Bulbs**—Lever (3). Set at X. Use shutter speeds of 1/30 sec. or slower.

**M5 and Type M Bulbs**—Lever (3). Set at M. All speeds are synchronized.

**SOLENOID SYNC:** Refer to Page 6.

## SELF-TIMER:

Cock shutter, lever (6). Slide self-timer button (9) toward camera. Move shutter cocking lever (6) to full right. Trip shutter lever (1). The shutter will open automatically in 8-12 seconds. Flash synchronization will be the same as at the X setting.



# NO. 0 PRONTOR SVS

WITH 1/300 TOP SPEED

**SHUTTER SPEEDS:** Knurled Ring (5). Revolve until desired speed setting is located over the index mark on the face of the shutter.

**COCK:** Lever (6). Move to the left until lever latches at all speeds, including B.

**TRIP:** Lever (1). Press down.

**B setting**—Shutter stays open as long as trip lever is held down.

**PRESS FOCUS:** None. To focus on the ground glass a locking type cable release should be used. Set the shutter speed at B. Cock the shutter and trip through the cable release using the locking feature of the cable release to hold the shutter open.

**DIAPHRAGM SETTING:** Lever (8). Set to desired f-number. Movement of the diaphragm lever (8) also positions scale pointer (9) on the EV scale.

**COUPLED EV SETTING:** Lever (7). Press in and position to solid dot. This couples the shutter and diaphragm settings. In the coupled position, changing one scale setting changes the other. To uncouple and operate diaphragm and speed setting independently, return lever (7) to the open dot position by pressing in and down.

**CABLE RELEASE:** Threaded Boss (2). Use tapered tip type cable release.

**FLASH CONNECTION:** Connector Boss (4). Attach a Graflite® Connecting Cord with a DIN or PC fitting.

## SYNCHRONIZATION:

**Electronic Flash**—Lever (3). Set at X.

**M2 Bulbs**—Lever (3). Set at X. Use shutter speeds of 1/30 second or slower.

**M5 and Type M Bulbs**—Lever (3). Set at M. All speeds are synchronized.

**SOLENOID SYNC:** Not recommended.

## SELF-TIMER:

Cock shutter, lever (6). Set lever (3) at V. Trip shutter lever (1). The shutter will open automatically in 8-12 seconds. Flash synchronization will be the same as at the X setting.

