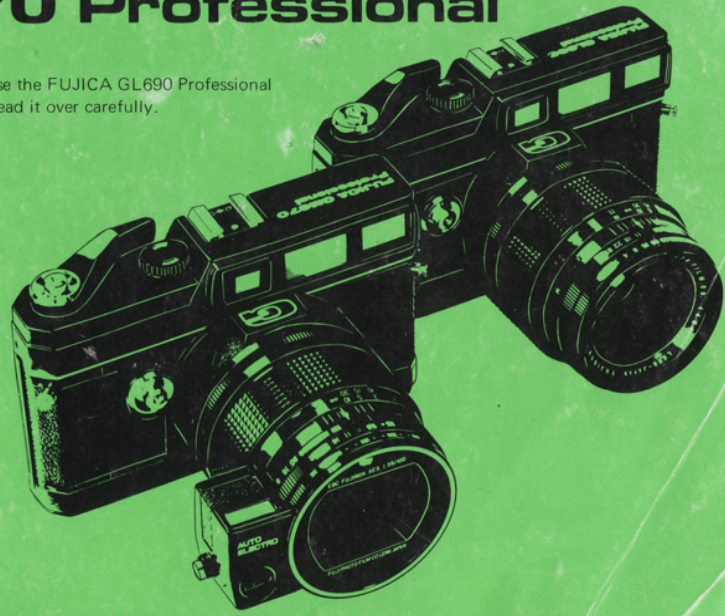


# FUJICA GL690 Professional

# FUJICA GM670 Professional

## Owner's Manual

This manual has been prepared to show you how to use the FUJICA GL690 Professional and FUJICA GM670 Professional correctly. Be sure to read it over carefully.



**FUJI FILM**



## ● MAIN FEATURE

The FUJICA GL690 Professional and FUJICA GM670 Professional are improved versions of the earlier and popular FUJICA G690BL. They offer additional handling ease and greater dependability. The 2¼ x 2¼ in. (6 x 7cm) format camera (GM670) joins the 2¼ x 3¼ in. (6 x 9cm) format camera (GL690) to offer more effective sports, press, aerial as well as general photography. These cameras are equipped with the world's first electron beam coated lens (EBC FUJINON AE 3.5/100mm) which incorporates all the mechanisms for fully automatic exposure in the lens itself. The precision aperture-preferred fully automatic exposure system of these cameras lets the photographer concentrate on taking his pictures without being distracted by the fuss and bother of exposure setting.

Their main features are as follows.

1. Double-image focusing Coupled range-viewfinder for quick and smooth focusing. Automatic compensation for parallax and changing field-of-view.
2. Two-stroke film advance lever advances the film and cocks the shutter.
3. Takes both 120 and 220 roll film.
4. Frame size: GL690: 2¼ x 3¼ in. (6 x 9cm)  
GM670: 2¼ x 2¼ in. (6 x 7cm)
5. Perfectly color balanced FUJINON interchangeable lenses from 50mm super wideangle to 180mm telephoto.
6. Between-the-lens shutter synchronizes with electronic flash and regular flash bulbs at all shutter speeds (Excepting the EBC FUJINON AE 3.5/100mm lens which is provided with X contact only.)

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## ● SPECIFICATIONS

Type	Interchangeable lens, coupled range-viewfinder camera.									
Frame Size	GL690: 2¼ x 3¼ in. (6 x 9cm) (56 x 82.6mm effective picture area). GM670: 2¼ x 2¼ in. (6 x 7cm) (56 x 69mm effective picture area).									
Film	<table border="1"> <thead> <tr> <th></th> <th>120 Roll Film</th> <th>220 Roll Film</th> </tr> </thead> <tbody> <tr> <td>GL690</td> <td>4exp. 8exp.</td> <td>16exp.</td> </tr> <tr> <td>GM670</td> <td>5exp. 10exp.</td> <td>20exp.</td> </tr> </tbody> </table>		120 Roll Film	220 Roll Film	GL690	4exp. 8exp.	16exp.	GM670	5exp. 10exp.	20exp.
	120 Roll Film	220 Roll Film								
GL690	4exp. 8exp.	16exp.								
GM670	5exp. 10exp.	20exp.								
Film Advance	Two-stroke film advance lever on body top advances film and cocks shutter. Provision for double exposure prevention and intentional multiple exposure.									
Frame Counter	Automatic reset additive type.									
Lens Mount	Bayonet (provided with safety lock).									
Range-Viewfinder	Double-image focusing coupled range-viewfinder with luminous bright frames for 100mm normal and 150mm telephoto lenses, automatic parallax compensation, 95% field of view at 1 meter, 92% at infinity, 0.75X magnification, 67mm base line, 50.3mm effective base line.									
Dimensions	4½ x 7¼ x 5⅝ in. (116 x 183 x 145mm) including normal lens, 1½ in. (38mm) body thickness.									
Weight	3.8 lbs. (1,745 g) with normal lens on, 2.5 lbs. (1,140 g) body alone.									
4										

### Accessories

- Interchangeable lenses (the same lenses are used on the GL690, GM670 and G690BL).  
FUJINON SWS 1:5.6 f=50mm (new wideangle lens)  
FUJINON SWS 1:5.6 f=65mm (new wideangle lens)  
EBC FUJINON AE 1:3.5 f=100mm (new normal lens)  
FUJINON S 1:3.5 f=100mm (new normal lens)  
FUJINON TS 1:5.6 f=150mm (telephoto lens)  
FUJINON TS 1:5.6 f=180mm (telephoto lens)
- Lens Hoods
- Sports Finder
- Close-up Lens
- Eyesight Adjustment Lens (the same lens is used on the FUJICA ST701 and ST801)
- Rightangle Finder (the same finder is used on the FUJICA ST701 and ST801)
- Accessory Shoe
- Q-setter
- Compartment Case

### Lens Specifications

Normal Lens  
Composition  
Angle of View

Focusing  
Closest Focusing  
Distance  
Aperture Scale  
Filter Size  
Shutter  
Shutter Speed

Normal Lens  
Composition  
Angle of View

Coating  
Closest Focusing  
Distance  
Focusing  
Aperture Scale  
Filter Size  
Shutter

Shutter Speed

FUJINON S 1:3.5 f=100mm  
3 components, 4 elements  
GL690: 53°  
GM670: 47°  
Coupled range-viewfinder

3.3 ft. (1m)  
3.5~32 provided with 1/2 step click stops  
72mmφ P=0.75mm  
Seiko #0, M & X contacts  
B, 1-1/500 sec. calibrated in increments  
of multiples.

EBC FUJINON AE 1:3.5 f=100mm  
3 components, 4 elements  
GL690: 53°  
GM670: 47°  
Multilayer EBC

3.3 ft. (1m)  
Coupled range-viewfinder  
3.5~32 provided with 1/2 step click stops  
72mmφ P=0.75  
Seiko #0 fully automatic exposure elec-  
tronic shutter.  
Automatic: 8-sec.~1/500-sec.  
Manual: B, 8-sec.~1/500-sec.

Film Speed Setting  
Exposure Control

Automatic Exposure  
Control Range  
Photocell,  
Receiving Angle  
Battery

Sync Contact  
Signals and  
Warnings

ASA 25~800 with 1/3rd-step click stops  
Aperture-preferred automatic shutter  
speed control

EV 0.6~19 (ASA 100)  
CdS  
15° all around.  
One 6V silver oxide battery (Eveready  
No.544, Mallory 4G13)  
X contact

Overexposure, underexposure, camera-  
shake shutter speed, battery condition

5

### • NAMES & FUNCTIONS OF PARTS



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① **Film Advance Lever**

Two-stroke lever advances film, cocks shutter and prevents double exposure. Automatic spacing between frames.

② **Shutter Release Button**

One on body top and one on body front. Front button for shooting with the camera held vertically. Both buttons provided with socket for cable release.

③ **Exposure Counter**

Automatic reset additive resets to "Start" when the camera back is opened.

④ **Focusing Ring**

⑤ **Aperture Selector Ring**

⑥ **Flash Selector Switch**

For switching from M to X contacts depending on the flash. All-speed synchronization.

⑦ **Shutter Speed Selector Ring**

⑧ **Lens Barrel Front**

Provided with 72mm  $\phi$  P=0.75mm screw for screwing in filter and lens hood.

⑨ **Film Selector Window**

⑩ **Accessory Shoe**

For mounting wideangle and telephoto lens finders and other accessories.

⑪ **Film Selector**

For setting the number of exposures the film being used will yield.

	GL690	GM670
120 2¼ x 2¼ in. (6x6cm, 6exp.) roll film	4exp.	5exp.
120 2¼ x 2¼ in. (6x6cm, 12exp.) roll film	8exp.	10exp.
220 2¼ x 2¼ in. (6x6cm, 24exp.) roll film	16exp.	20exp.

⑫ **Range-Viewfinder Window**

Double-image focusing coupled range-viewfinder, luminous bright frames for 100 and 150mm lenses, automatic parallax compensation.

⑬ **Neck Strap Stud**

⑭ **Lens Mount**

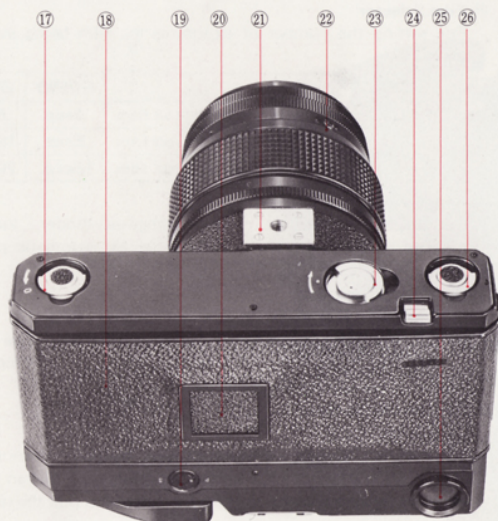
Provided with reference mark for mounting lens. The lens is mounted by aligning the white and red dot on the lens mounting ring with the red dot on the lens mount.

⑮ **Lens Mounting Ring**

⑯ **Lens Safety Lock**

The lock is released by closing the dark blind. To dismount the lens, push the lock back, turn the mounting ring to align the dot on the ring with the dot on the lens mount and pull the lens out.

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⑰ **Camera Back Lock/Spool Loading Key**

The camera back is opened by erecting the key and turning it in the direction of the arrow. The key is lifted up to insert the take-up spool.

⑱ **Camera Back**

⑲ **R-S Button**

Set it at "R" for shooting and set it at "S" for releasing the shutter when the camera is not loaded.

⑳ **Film Reminder Frame**

Tear off the film box cover and insert it in the frame as a reminder of the type of film loaded in the camera.

㉑ **Tripod Socket Plate**

The tripod is screwed into the socket. The Q-setter lets you mount and dismount the camera faster.

㉒ **Sync Terminal**

㉓ **Shutter Curtain Set Key**

㉔ **Shutter Curtain Release Key**

The Shutter Curtain must be closed when changing the lens and when making multiple exposures. The Shutter Curtain Release Key is pushed outward to open the shutter curtain.

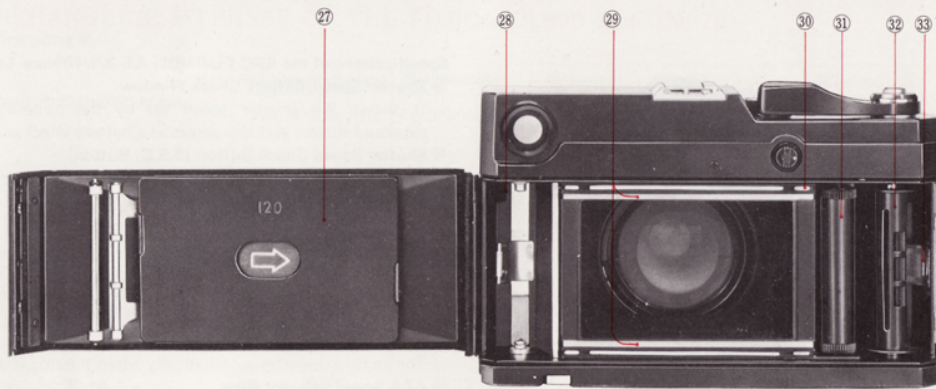
㉕ **Viewfinder Eyepiece**

The eyepiece with an Eye-cup offers a better view through the viewfinder. It is also used for attaching the eyesight Adjustment lens, Rightangle Finder and Accessory Shoe.

㉖ **Film Loading Key**

The key is lifted up to load the film.

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**27 Pressure Plate**

One side of the plate is used for exposing 120 roll film and the other side for 220 roll film. The plate is released for turning over by pressing it in the direction of the arrow.

**28 Film Chamber**

**29 Frame Aperture**

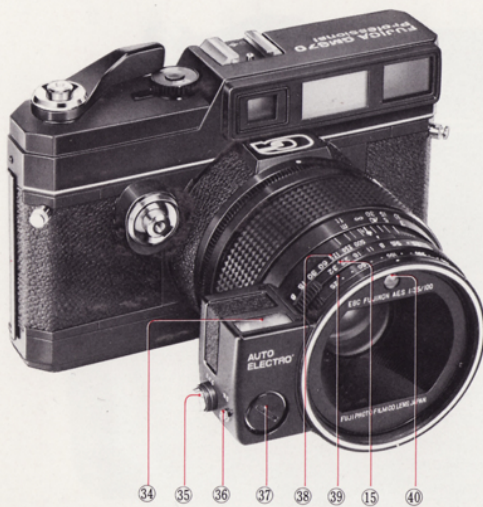
**30 Film Start Positioning Mark**

**31 Exposure Counter Roller**

**32 Take-up Spool**

**33 Pressure Spring**

It prevents the film from buckling.



**Specifications of the EBC FUJINON AE 3.5/100mm Lens**

**34 Shutter Speed/Battery Check Window**

It shows the shutter speed set by the camera's automatic exposure system and also serves as a battery checker.

**35 Shutter Speed Check Button (S.S.C. Button)**

The needle in the Shutter speed/Battery Check Window points to the shutter speed being used for automatic exposure when the button is depressed.

**36 Battery Check Button (B.C. Button)**

**37 Battery Chamber Cover**

The cover is screwed on. The battery chamber holds one 6V silver battery (Eveready No.544 or Mallory 4G13).

**38 Shutter Speed Selector Ring**

The camera operates automatically when the ring is set at A.

**39 ASA Speed Selector Ring**

**40 EE Window**

Avoid finger marks and keep it clean.

● INTERCHANGEABLE LENSES OF THE FUJICA GL690 and GM670

◀ Specifications ▶

① Interchangeable Lenses	⑭ Super Wideangle	⑮ Wideangle	⑯ Normal	⑰ Normal	⑱ Telephoto	⑲ Telephoto
	FUJINON SWS	FUJINON SWS	EBC FUJINON AE	FUJINON S	FUJINON TS	FUJINON TS
② Speed	1 : 5.6	1 : 5.6	1 : 3.5	1 : 3.5	1 : 5.6	1 : 5.6
③ Focal Length	50 mm	65 mm	100 mm	100 mm	150 mm	180 mm
④ Composition (components & elements)	6 - 8	4 - 8	3 - 4	3 - 4	4 - 5	5 - 5
⑤ Field of View-GL690	90°	75°	53°	53°	36°	30°
-GM670	83°	68°	47°	47°	32°	27°
⑥ Closest Focusing Distance	3.3 ft. (1m)	3.3 ft. (1m)	3.3 ft. (1m)	3.3 ft. (1m)	6.6 ft. (2m)	8.2 ft. (2.5m)
⑦ Shutter	Seiko # 0	Seiko # 0	⑳ Fully automatic exposure Seiko #0 electronic shutter	Seiko # 0	Seiko # 0	Seiko # 0
⑧ Maximum Aperture	F32	F32	F32	F32	F45	F45
⑨ Shutter Speed	B, 1~1/500 sec.	B, 1~1/500 sec.	㉑ Manual 8~1/500 sec. Automatic B, 8~1/500 sec.	B, 1~1/500 sec.	B, 1~1/500 sec.	B, 1~1/500 sec.
⑩ Synchronization	M & X	M & X	㉒ X only	M & X	M & X	M & X
⑪ Filter Size	72φ 0.75P	72φ 0.75P	72φ 0.75P	72φ 0.75P	72φ 0.75P	72φ 0.75P
⑫ Lens Front Outer Diameter	75φ	75φ	80φ	75φ	75φ	75φ
⑬ Weight	595 g	610 g	700 g	605 g	913 g	1,025 g
⑭ Maximum Lens Barrel Diameter	90φ	90φ	90φ	90φ	90φ	90φ
⑮ Length	84 mm	82 mm	83 mm	83 mm	85 mm	97 mm
⑯ Finder	㉓ Counte Galileiou Albada type					㉔ albada
⑰ Hood	㉕ Wideangle	㉖ Wideangle	㉗ Exclusive	㉘ Standard hood	㉙ Telephoto hood	㉚ Telephoto hood

◀ Mounting and Dismounting ▶

1. Mounting



Align the white and red dot on the Mounting Ring ⑮ with the red dot on the Lens Mount ⑭, fit the lens on and turn the mounting Ring to the right (clockwise).

2. Dismounting



Close the shutter curtain by erecting the Shutter Curtain Set Key ㉓ and turning it in the direction of the arrow. Next, push the Lens Safety Lock ⑯ back toward the camera body, turn the Lens Mounting Ring ⑮ to the left (counter-clockwise) as far as it will go and dismount the lens.

**Note:**

1. The Lens Mounting Ring stays locked until the shutter curtain has been closed.
2. After changing the lens, open the shutter curtain by pushing the Shutter Curtain Release Key outward. The Shutter Release Buttons will not operate unless the shutter curtain is open.

### ◀ How to Use the Depth of Field Scale ▶

There is a zone of sharpness before and behind the point on which a lens is sharply focused. It is known as the lens depth of field and its depth differs with the lens focal length, aperture and shooting distance.

The white aperture numbers engraved on the lens barrel on both sides of the Lens Setting Mark (long red line with a ball in the middle) is the depth of field scale. This is the way to use it:

If you are using a 100mm normal lens with the distance set at 15 ft. (5m) and the aperture at f/8, the depth of field extends from 14.7 ft. (4.5m) from the camera to 21.6 ft. (6.58m). (See depth of field tables)

### Depth of Field Scale

#### • Normal Lens

FUJINON S 1:3.5 f=100mm  
EBC FUJINON AE 1:3.5 f=100mm

Unit: meters

Distance ② Aperture	① 1	1.5	2	3	5	10	20	∞
3.5	0.98~ 1.02	1.45~ 1.55	1.92~ 2.09	2.82~ 3.20	4.52~ 5.59	8.26~ 12.7	14.1~ 34.5	47.6~ ∞
4	0.98~ 1.02	1.45~ 1.56	1.91~ 2.10	2.80~ 3.23	4.46~ 5.68	8.06~ 13.2	13.5~ 38.5	41.7~ ∞
5.6	0.97~ 1.03	1.43~ 1.58	1.87~ 2.14	2.73~ 3.34	4.28~ 6.01	7.49~ 15.1	12.0~ ∞	29.7~ ∞
8	0.95~ 1.05	1.40~ 1.62	1.82~ 2.21	2.62~ 3.50	4.03~ 6.58	6.76~ 19.2	10.2~ ∞	20.8~ ∞
11	0.94~ 1.07	1.36~ 1.66	1.77~ 2.30	2.50~ 3.74	3.76~ 7.46	6.02~ 29.4	8.62~ ∞	15.2~ ∞
16	0.91~ 1.15	1.31~ 1.75	1.68~ 2.48	2.33~ 4.21	3.38~ 9.62	5.10~ ∞	6.85~ ∞	10.4~ ∞
22	0.88~ 1.15	1.25~ 1.87	1.58~ 2.72	2.15~ 4.97	3.01~ 14.7	4.31~ ∞	5.49~ ∞	7.8~ ∞
32	0.84~ 1.24	1.16~ 2.11	1.45~ 3.25	1.90~ 7.08	2.55~ 12.5	3.42~ ∞	4.13~ ∞	5.2~ ∞

#### • Wideangle Lens

FUJINON SWS 1:5.6 f=50mm

Unit: meters

Distance Aperture	1	1.5	2	3	5	10	20	∞
5.6	0.88~ 1.16	1.25~ 1.88	1.58~ 2.79	2.14~ 5.03	2.99~ 15.2	4.27~ 29.1	5.42~ ∞	7.40~ ∞
8	0.84~ 1.24	1.16~ 2.11	1.45~ 3.25	1.90~ 7.08	2.55~ 12.5	3.42~ ∞	4.13~ ∞	5.20~ ∞
11	0.79~ 1.36	1.07~ 2.48	1.31~ 4.24	1.67~ 14.4	2.16~ ∞	2.75~ ∞	3.18~ ∞	3.90~ ∞
16	0.72~ 1.62	0.95~ 3.54	1.13~ 8.62	1.39~ 19.7	1.71~ ∞	2.06~ ∞	2.30~ ∞	2.60~ ∞
22	0.65~ 2.12	0.84~ 7.21	0.97~ 35.71	1.16~ ∞	1.37~ ∞	1.59~ ∞	1.73~ ∞	1.90~ ∞
32	0.57~ 4.31	0.70~ 9.87	0.79~ ∞	0.91~ ∞	1.03~ ∞	1.15~ ∞	1.22~ ∞	1.30~ ∞

#### • Wideangle Lens

FUJINON SWS 1:5.6 f=65mm

Unit: meters

Distance Aperture	1	1.5	2	3	5	10	20	∞
5.6	0.93~ 1.09	1.34~ 1.70	1.73~ 2.38	2.42~ 3.94	3.58~ 8.30	5.57~ 48.8	7.72~ ∞	12.6~ ∞
8	0.90~ 1.13	1.28~ 1.81	1.63~ 2.59	2.24~ 4.55	3.19~ 11.6	4.68~ ∞	6.11~ ∞	8.80~ ∞
11	0.86~ 1.19	1.22~ 1.96	1.52~ 2.91	2.04~ 5.65	2.81~ 22.8	3.90~ ∞	4.85~ ∞	6.40~ ∞
16	0.81~ 1.29	1.12~ 2.28	1.38~ 3.67	1.78~ 9.42	2.34~ ∞	3.06~ ∞	3.61~ ∞	4.40~ ∞
22	0.76~ 1.45	1.02~ 2.82	1.23~ 5.33	1.55~ ∞	1.95~ ∞	2.42~ ∞	2.76~ ∞	3.20~ ∞
32	0.69~ 1.83	0.89~ 4.71	1.05~ ∞	1.27~ ∞	1.53~ ∞	1.80~ ∞	1.98~ ∞	2.20~ ∞

● Telephoto Lens

FUJINON TS 1:5.6 f=150mm

Unit: meters

Distance \ Aperture	2	3	5	12	20	30	∞
5.6	1.94~ 2.06	2.87~ 3.14	4.65~ 5.40	8.70~ 11.8	15.4~ 28.5	20.7~ 54.3	67.0~ ∞
8	1.92~ 2.10	2.82~ 3.21	4.52~ 5.60	8.24~ 12.7	14.0~ 34.9	18.3~ 83.3	46.9~ ∞
11	1.89~ 2.12	2.76~ 3.29	4.36~ 5.86	7.73~ 14.2	12.6~ 48.4	16.0~ ∞	34.1~ ∞
16	1.84~ 2.19	2.66~ 3.44	4.12~ 6.36	7.01~ 17.4	10.8~ ∞	13.2~ ∞	23.4~ ∞
22	1.79~ 2.27	2.55~ 3.64	3.87~ 7.08	6.30~ 24.2	9.20~ ∞	10.9~ ∞	17.0~ ∞
32	1.71~ 2.41	2.39~ 4.03	3.50~ 8.72	5.40~ 68.2	7.39~ ∞	8.43~ ∞	11.7~ ∞
45	1.61~ 2.63	2.21~ 4.69	3.13~ 12.5	4.55~ ∞	5.88~ ∞	6.52~ ∞	8.30~ ∞

● Telephoto Lens

FUJINON TS 1:5.6 f=180mm

Unit: meters

Distance \ Aperture	2.5	3	5	10	20	30	∞
5.6	2.43~ 2.57	2.91~ 3.10	4.75~ 5.27	9.06~ 11.2	16.6~ 25.2	22.9~ 43.6	96.4~ ∞
8	2.40~ 2.61	2.87~ 3.14	4.66~ 5.40	8.71~ 11.7	15.4~ 28.4	20.8~ 54.0	67.5~ ∞
11	2.37~ 2.65	2.83~ 3.20	4.54~ 5.57	8.31~ 12.6	14.2~ 33.8	18.6~ 77.1	49.1~ ∞
16	2.31~ 2.72	2.76~ 3.29	4.35~ 5.87	7.71~ 14.2	12.6~ 49.1	15.9~ ∞	33.8~ ∞
22	2.25~ 2.81	2.67~ 3.42	4.15~ 6.28	7.11~ 16.9	11.0~ ∞	13.5~ ∞	24.5~ ∞
32	2.15~ 2.98	2.55~ 3.65	3.86~ 7.11	6.28~ 24.6	9.15~ ∞	10.8~ ∞	16.9~ ∞
45	2.04~ 3.23	2.40~ 4.00	3.53~ 8.57	5.45~ 60.0	7.50~ ∞	8.57~ ∞	12.0~ ∞

● CAMERA OPERATION

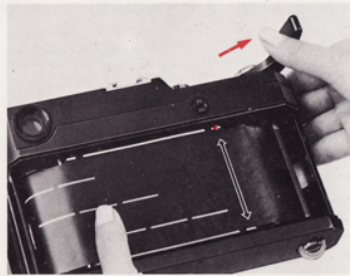
◀ Film Loading ▶

1. Film Loading



1. Open the Camera Back ⑱ by erecting the Camera Back Lock/Spool Loading Key ⑲ and turning it in the direction of the arrow. Next, pull the key outward to retract the shaft and turn it to the left to lock the shaft in that position. Now insert the take-up spool, turn the key to the right to release the shaft.
2. Load the film. Repeat the same procedure with the film Loading Key ⑳.

2. Film Start Positioning Mark

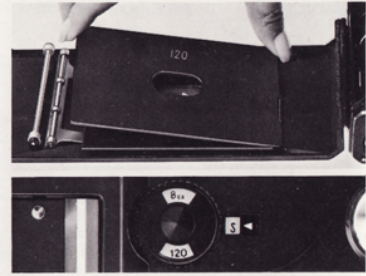


Pass the film paper leader over the film guide, insert the leading end into the take-up spool slot and wind the Film Advance Lever ① until the start mark (two-headed arrow) on the paper leader is aligned with the Film Start Positioning Mark ㉑ (red dot).

Note:

- To prevent the paper leader from buckling, press it down lightly with your finger while winding it on the take-up spool.
- Be sure to insert the tip of the paper leader securely into the take-up spool slot before winding.

3. 120 and 220 Roll Film

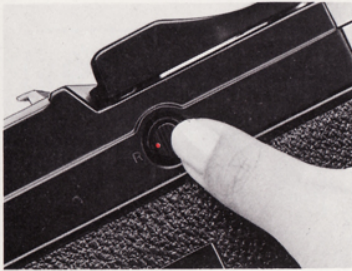


When using 120 roll film, the Pressure Plate ㉒ is set so that the side marked 120 faces out and the Film Selector ㉓ is set at 120.

When using 220 roll film, turn the Pressure Plate over so that the side marked 220 faces out and set the Film Selector at 220.



4. Close the Camera Back and Wind the Film



Set the green dot on the R-S Button ⑭ at R and close the Camera Back ⑮. Next, push the Film Advance Lever ① as far as it will go to wind the film and cock the shutter. This will advance the Exposure Counter from S (Start) to 1 (1st frame).

**Note:**

- The Camera Back will lock by itself when it is closed but always check to make sure it is tightly closed.



- Tear off the film box cover and insert it in the Film Reminder Frame ⑳ to remind you of the type of film loaded in the camera.
- If the camera is not loaded, the shutter will not operate unless the R-S Button is set at S.
- If the camera is loaded and the shutter is released with the R-S Button set at S, or if the R-S Button is turned from R to S and from S to R again, the Film Ad-

vance Lever may become locked and fail to go all the way through. Once the film is loaded, be sure to set the R-S Button at R and leave it there. In case the R-S Button is turned by mistake after the film is loaded and the Film Advance Lever cannot be wound all the way through, press down the Shutter Release Button, hold it there, and wind the Film Advance Lever at the same time. The Film Advance Lever will return to its normal position when the Shutter Release Button is released. Now set the R-S Button at R.

« Shooting »

1. Shutter Speed and Aperture Setting



The shutter speed and aperture are set by turning the Shutter Speed Selector Ring ⑦ and the Aperture Selector Ring ⑤

2. Focusing



Look through the Viewfinder Eyepiece ②, bring the subject's center of interest in the center of the Viewfinder and turn the Focusing Ring ④ until the double images in the bright square spot of the Viewfinder converge into one. (All the interchangeable lenses of the FUJICA GL690 and GM670 are focused in the same way.)

**Note:** To shoot infrared pictures, focus the lens in the normal way then bring the point of correct focus on the Focusing Ring opposite the Infrared Mark (the short red line marked R and located next to the Exposure Setting Mark (long red line on the lens barrel marked with a ball in the middle to make the proper compensation.

3. Field of View



1. The outer bright frame in the viewfinder is used for framing the picture with a 100mm normal lens on the camera. The inner bright frame is used for framing the picture with a 150mm telephoto lens on the camera. Parallax is automatically corrected as you turn the Focusing Ring.
2. A moving subject can be framed faster by watching it through the viewfinder with the right eye and looking at it directly with the left eye. The field of view at short distance is 95%, and 92% when the camera is set at infinity.
3. Special viewfinders are supplied with the lenses other than the 100mm normal and 150mm telephoto.

#### 4. Special Viewfinders



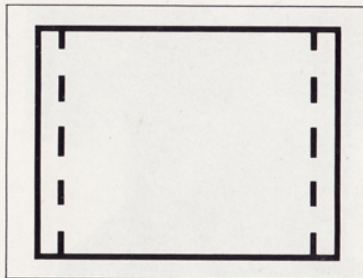
1. The 50mm super wideangle, 65mm wideangle and 180mm telephoto lenses are each supplied with an exclusive viewfinder. (The viewfinder for the 100mm normal and 150mm telephoto lenses are built into the camera.)



2. After changing the lens, the special viewfinder is mounted on the camera's Accessory Shoe ⑩.



3. To correct for parallax, focus the lens then set the distance scale on the special viewfinder eyepiece so that it agrees with the setting of the lens distance scale.



4. The subject is viewed through the special viewfinder. The outer frame is used for shooting with the GL690 (6 x 9cm format) and the inner frame (marked with hyphenated lines) is used for shooting with the GM670 (6 x 7cm format).

	Type	Magnification
50mm	counter-Galelien albada	0.39X
65mm	counter-Galelien albada	0.39X
180mm	albada	1.0X

#### 5. How to Avoid Camera Shake



1. Hold the camera steady. The camera will shake if it is held improperly. This is the way to hold it:  
 Press the left elbow against the side of the chest and hold the lens in the palm of the left hand so that the fingers will be in a position to turn the Focusing Ring ④.  
 Place the thumb of the right hand on the Film Advance Lever ① and the forefinger on the Shutter Release Button ②.  
 Relax the shoulder muscles, press the

camera lightly against the face, look through the viewfinder, focus the lens and press the Shutter Release Button gently down.



- The camera is mounted on a tripod and the shutter is operated with a cable release when shooting indoor and night pictures which require a shutter speed of 1/30 sec. or longer.

**Note:** If the Shutter Release Button is pressed far down but short of activating the shutter then released, it may become locked and fail to go down again when it is depressed a second time. To unlock it, reset the R-S Button ⑭ at S, press down the Shutter Release Button and turn the R-S Button back to R and resume shooting.

#### 6. Film Advance



Wind the Film Advance Lever ① twice to advance the film and cock the shutter. The Film Advance Lever will remain locked until the shutter is released to prevent double exposure.

#### 7. Flash Photography

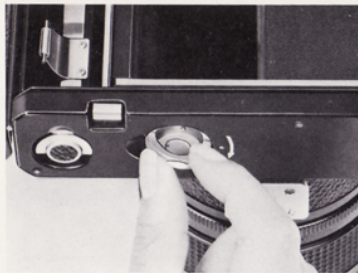


All the interchangeable lenses of the GL690 and GM670 are provided with X and M contacts (except EBC FUJINON AE 3.5/100mm, which is provided for X contact only) and an inter-lens shutter for synchronization with all shutter speeds. The Flash Selector Switch ⑥ is flipped to X when using electronic flash and M when using M-class flash bulbs. To shoot, just follow the directions packed with the flash.

For daylight flash photography, read the chapter entitled "Daylight Flash Photography".

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#### 8. Multiple Exposure



- Expose the film then close the shutter curtain. The Shutter Release Button is now locked and the Lens Safety Lock ⑮ is released. (The above picture shows the camera back opened but in this case it will be closed.)



- Dismount the lens and cock the shutter by pushing the Shutter Setting Lever in the back end of the lens strongly with the butt end of a pencil, then remount the lens. Next, set the R-S Button at S, open the shutter curtain aim the camera at your subject and press down the Shutter Release Button. Repeat the same process to make triple and quadruple exposures.



**Note:**

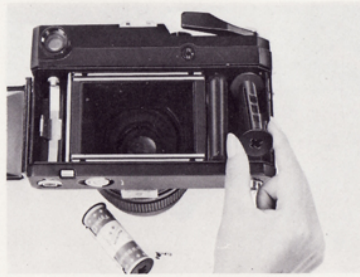
- The Shutter Release Button will not operate unless the shutter curtain is open.
- After making the multiple exposure, be sure to reset the R-S Button at R.

## ◀ Film Unloading ▶

### 1. After Shooting



After completing the number of exposures the roll of film will allow, use the Film Advance Lever ① to wind the film onto the Take-up Spool ②. Keep winding until a sudden release of tension is felt, then give it about three extra strokes. Next, open the camera back, unload the film and seal it securely.



The empty spool is transferred into the Take-up Spool Chamber for taking up the next roll of film.

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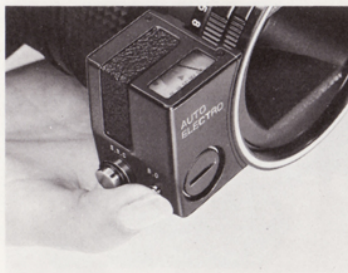
## ● HOW TO USE THE EBC FUJINON AE LENS

### 1. Battery Loading



Open the Battery Chamber Cover ⑳ and insert the battery (6V silver batter) correctly into the battery chamber and close the cover.

### 2. Battery Check



Press the Battery Check Button ㉑ to see if the battery is working. If the needle swings beyond the green triangular mark, the battery is working properly. If not, change the battery.

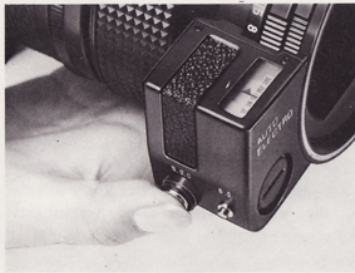
**Note:** If the battery is not loading or if it is exhausted, the shutter will always operate at 1/500-second whether the camera is set for automatic or manual operation.

### 3. Automatic Exposure Setting



1. Turn the Film Speed Selector Ring ㉒ and set it for the speed of the film you are using.
2. Turn the Shutter Speed Selector Ring and set it at A.
3. Turn the Aperture Selector Ring ㉓ and set the aperture. The camera will automatically set the correct shutter speed for the aperture being used. All you need to do is aim the camera and press down the Shutter Release Button. (The camera's automatic exposure system covers from EV0.6 (f/3.5 8-sec./ASA100) to EV19 (f/32 1/500-sec./ASA100).

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**Note:**

- To find out the shutter speed set by the camera's automatic exposure system, just watch the Shutter Speed/Battery Check Window and press down the Shutter Speed Check Button. If the needle is in the reddish-orange zone, it means overexposure and the aperture must be stopped down further. If the needle is in the yellowish-orange zone, the shutter speed is 1/30-second or slower, in which case the aperture has to be opened up or the camera must be

mounted on a tripod to prevent camera shake.

- Over and underexposure can be controlled without changing the aperture. All you do is turn the ASA Speed Selector Ring.

**4. Manual Exposure Setting**

Set the shutter speed (anywhere from B, 8-sec. to 1/500-sec.) by turning the Shutter Speed Selector Ring. (When the camera is set manual, the Shutter Speed Check Button may not show you the correct shutter speed.)

**5. Using the Camera in Place of an Exposure Meter**

Set the camera for automatic exposure and press down the Shutter Speed Check Button. You will now be able to read the correct shutter speeds for the different apertures.

**• DAYLIGHT FLASH PHOTOGRAPHY**

**1. Manual Exposure Settings**

1. If you are using an ASA 100 film, use an exposure meter to measure the light in the brightest area of your subject. If the reading is EV14 (f/8 1/250-sec.), and if a flash with a guide number of 32 (ASA 100, meters) covers a distance of 3 meters (10 ft.), the aperture is set at f/11 and the shutter speed at 1/125-sec. for shooting since guide number = f-stop x meter (covering distance) and, therefore,

$$f = \frac{G.No.}{m} = \frac{32}{3} \approx 11,$$

and since the exposure value in this case is EV14.

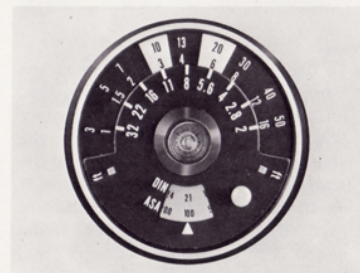
2. If you are using a flash for supplementary lighting, use the same aperture and shutter speed but move the flash a little farther away from the subject. The shadow areas will turn out clearly lighted and look natural.

**2. Daylight Flash Photography with EBC FUJINON AE 3.5/100mm lens and an automatic Professional strobe.**

Since the EBC FUJINON AE 3.5/100mm lens is equipped with an aperture-preferred fully automatic exposure type electronic shutter, combination with an automatic professional strobe with a 2-way automatic light control of f/11 and f/5.6, (ASA100) will greatly simplify daylight flash photography.



1. If you are using an ASA 100 film, for example, the exposure setting is from EV13~16 (F/11 1/60~1/500-sec.) on a clear day and from EV10~13 (F/5.6 1/30~1/250-sec.) on a cloudy day. The aperture is therefore set at f/11 or f/5.6, the shutter speed selector ring at A (automatic) and the ASA speed selector ring at 100. This will give you the correct exposure for the subject you are shooting.



2. Next, by turning the light switch on your professional strobe to suit the aperture (f/11 and f/5.6), the light from the flash will give you the correct exposure.
3. The foregoing methods will let you take flash pictures in daylight without the necessity of figuring out camera settings and distances from the flash guide number.
4. If you are using flash for supplementary lighting, close down the aperture by  $\frac{1}{2}$  or 1 full stop (f/11 to f/11½, f/5.6 to f/5.6½ or f/11 to f/16 and f/5.6 to f/8) to make the details stand out more naturally. Use the ASA Speed Selector Ring for fractional exposure control.



• Taken without flash (f/8 1/250)



• Flash used as supplementary lighting (EBC FUJINON AE and an automatic professional strobe. (lens setting: f/11½, flash setting: f/11).

← • Taken with EBC FUJINON AE 3.5/100mm and an automatic professional strobe. (lens setting: f/11, flash setting: f/11).



## ● INTERCHANGEABLE LENSES & ACCESSORIES

### ◀ Interchangeable Lenses ▶

① FUJINON SWS	1:5.6 f=50mm (new type)
② FUJINON SWS	1:5.6 f=65mm (new type)
③ FUJINON S	1:3.5 f=100mm (new type)
④ EBC FUJINON AE	1:3.5 f=100mm (new type)
⑤ FUJINON TS	1:5.6 f=150mm
⑥ FUJINON TS	1:5.6 f=180mm

### ◀ Accessories ▶

#### ● Lens Hoods

Useful for cutting out extraneous light from the lens. Yields clearer pictures and recommended especially for shooting against the light.

- ⑦ Hood for 50 and 65mm wideangle lenses
- ⑧ Hood for 100mm lens
- ⑨ Hood for EBC FUJINON AE 100mm lens
- ⑩ Hood for 150 and 180mm telephoto lenses

#### ● Viewfinders

The viewfinder for the 100 and 150mm lenses is built into the camera. All the other interchangeable lenses are supplied with special viewfinders.

- ⑪ Finder for 50mm lens.
- ⑫ Finder for 65mm lens.
- ⑬ Finder for 180mm lens.

#### ● Other Accessories

- ⑭ Eyecup (the same eyecup is used on the ST701 and ST801)

It gives you a clearer view through the viewfinder.

- ⑮ Eyesight Adjustment Lens (the same attachment lens is used on the ST701 and ST801)

This is attached to the viewfinder eyepiece to let near- and far-sighted people to focus the lens more easily. +2 and +0.5 for the farsighted and -2.5 and -4 for the nearsighted.

- ⑯ Close-up Lens

This is attached in front of the taking lens for shooting extreme close-ups.

- ⑰ Rightangle Finder (the same finder is used on the FUJICA ST701 and ST801)

It allows you to shoot comfortably from low angles as well as with the camera mounted on a copying stand. Correction for eyesight is made by turning the eyepiece.

- ⑱ Sports Finder

Simplifies framing of fast-moving subjects.

- ⑲ Accessory Shoe

For mounting viewfinders, clip-on type flash and other accessories.

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## ● HOW TO CARE FOR THE CAMERA

### ㉔ Q-Setter

The Q-setter adapter is mounted on the camera's tripod socket plate and the Q-setter itself is mounted on the Tripod. This arrangement lets you mount the camera on the tripod and dismount it much faster.

### ㉕ Neck Strap

For slinging the camera around the shoulder when not in use and around the neck when shooting to prevent camera shake.

### ㉖ Compartment Case

For holding the camera, interchangeable lenses, accessories and extra rolls of film. Designed for shoulder carrying with emphasis on manoeuvrability.

- Be sure to set the R-S Button at S when operating the unloaded camera.
- Always load and unload film in subdued light.
- When shooting for sustained periods in -20°C temperature or lower, ask for anti-freeze treatment. (This service is rendered on request and cost basis).
- After unloading the exposed film, always depress the shutter release button to make sure the shutter is released.
- Do not leave the camera in the car in the summer time or in moist places for prolonged periods.
- Always clean the camera before and after use. The insides should be dusted with an air brush and the outsides should be wiped with silicon cloth.
- Do not put finger marks on the lens and viewfinder glass. In case you do, wipe off with lens cleaning fluid.
- Keep the camera away from dust and moisture and always put a cap on both ends of the lens when not in use.

## ● CHECK THE CAMERA BEFORE SHOOTING

The FUJICA GL690 and GM670 are designed for professional use. Always check the camera before use to prevent costly mistakes.

### 1. Film Advance Lever

Check the lever to make sure it is working smoothly. There is a limit to the mechanical durability of the film winding unit. Always ask for an overhaul about once each year.

### 2. Rangefinder

Look through the viewfinder and focus the lens on infinity and on a close-range subject with the double-image focusing spot and check the distance scale on the lens barrel to make sure they agree. All the better if you can open the camera back and check the focused image at the film plane with a sheet of ground glass.

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### 3. Shutter

Set the R-S Button at S, open the camera back and check the different shutter speeds with the shutter release button. The quantity of light reaching your eye and the sound of the shutter will give you a close indication of the shutter's condition. There is also a limit to the mechanical durability the shutter. A mechanical shutter needs overhauling about once a year and an electronic shutter about once every two years.

### 4. Flash Synchronization

Mount the flash, open the camera back, open the aperture fully, set the shutter speed for the flash you are using and release the shutter to make sure it synchronizes with the flash.

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