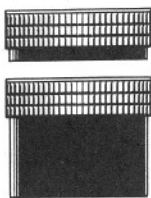


INSTRUCTIONS



FUJICA

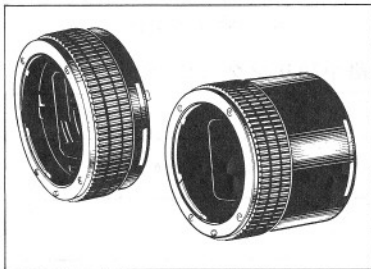
AUTO EXTENSION TUBES

×25/×50

The Fujica Auto Extension Tubes X25 and X50 use a Fujica X mount to take close-ups with X-Fujinon lenses. Because they are provided for automatic aperture stop down and full aperture metering, exposure determination is much simplified. In other words, you can take close-ups with ease by taking full advantage of the automatic exposure system of the Fujica AX-5, AX-3 and AX-1 as well as the match-needle system of the Fujica STX-1. Since the magnification differs according to the focal length of the lens used, you can readily take close-ups of flowers, insects, small objects of art, etc. by carrying them around with your interchangeable lenses. The X25 has a tube length of 25mm, and the X50 has that of 50mm. Any lens having a single focal length of 35mm to 200mm can be used.

■ MOUNTING

1. Remove the front and rear caps of the Extension Tube by turning them to the left.
2. Place the red dot on the front of the Extension Tube against the red dot on the lens' mounting end, fit it in and turn it 65° to the right. It will lock into position with a click.
3. Place the red dot on the rear of the Extension Tube against the red dot on the camera's lens mount, fit it in and turn it 65° to the right. It will lock into position with a click.



Notes: ① X25 and X50 cannot be used in combination.

- ② After you are through using the Extension Tubes, put on the front and rear caps before putting them away.

■ TAKING PICTURES

1. Refer to the accompanying close-up table for the focusing distances of the lens you are using and position the camera.
2. Focus the lens.
3. Set the exposure as you would do normally with the camera you are using.
4. Squeeze the shutter release gently down to take your picture.

Note: Use a tripod and cable release to prevent camera shake.

■ DEPTH OF FIELD AND EXPOSURE

Since the depth of field is extremely narrow at close range, the aperture should be stopped down as much as possible (f/8 or more) to obtain sharp pictures. As a result, you will have to use a slow shutter speed. It is, therefore, necessary to mount the camera on a tripod to prevent camera shake.

■ EFFECTIVE f-NUMBER AND EXPOSURE

The aperture scale engraved on the lens applies when the lens is mounted directly on the camera and the focusing ring is set to infinity (∞). The effective f-number of the lens decreases as the shooting distance becomes closer. Though this decrease is negligible at close shooting range of the lens alone, it will affect the exposure considerably if you are shooting with an extension tube or other close-up equipment between the camera and lens. However, the Fujica AX-5, AX-3, AX-1, and STX-1 are provided for TTL full-aperture metering and will automatically

compensate for this.

You can take extreme close-ups with ease in practically the same procedure as in normal photography.

■ EXPOSURE COMPENSATION

If you are using a separate exposure meter or taking flash pictures, exposure compensation is necessary to compensate for a loss of light in close-up photography. Use the following table as a guide to determine the amount of compensation.

Magnification	1/10 1/8	1/6 1/5	1/4 1/3	1/2 2/3	1/1.2 1
Exposure Factor	1.21 1.27	1.37 1.44	1.56 1.77	2.25 2.79	3.25 4
Compensation required		1/2 stop	1 stop	1 1/2 stops	2 stops

Note: The magnification is calculated by the following formula:

$$\text{Magnification} = \frac{D - (f + c)}{f + c}$$

where D = shooting distance
f = lens focal length
c = tube length

■ FLASH EXPOSURE

In close-up photography, flash pictures should be taken with a flash held away from the camera to insure that the subject is adequately illuminated. Lighting at about a 45° angle is generally best, and the exposure should be determined by compensating for a loss of light because the reflected light does not directly reach the film. To find the correct exposure, divide the guide number (GN) of your flash by the distance from flash to subject (D), and then correct the calculated aperture ($\frac{GN}{D}$) by referring to the above exposure guide table.

■ CLOSE-UP TABLE FOR EXTENSION TUBES X25/X50

Lens	Extension Tube	Film-Subject Distance	Magnification
X-Fujinon W 2.8/24	25	131 mm	1.0~1.6
	50	144~147 mm	2.0~2.2
X-Fujinon W 3.5/28	25	134~135 mm	0.9~1.0
	50	143~146 mm	1.7~1.9
X-Fujinon W 2.8/35	25	160~164 mm	0.7~0.8
	50	163~166 mm	1.4~1.6
X-Fujinon 1.6/50	25	209~222 mm	0.5~0.6
	50	195 mm	1.0~1.1
X-Fujinon 1.6/55	25	221~245 mm	0.5~0.6
	50	207~208 mm	0.9~1.1
X-Fujinon 2.2/55	25	204~259 mm	0.5~0.6
	50	221 mm	0.9~1.0
X-Fujinon M 3.5/55	25	216~252 mm	0.5~1.0
	50	216~223 mm	0.9~1.4
X-Fujinon T 2.8/100	25	506~628 mm	0.3~0.4
	50	426~453 mm	0.5~0.6
X-Fujinon T 3.5/135	25	763~1019 mm	0.2~0.3
	50	613~681 mm	0.4~0.5
X-Fujinon T 4.5/200	25	1430~2123 mm	0.1~0.2
	50	1139~1349 mm	0.3~0.4

FUJI PHOTO FILM CO., LTD.

26-30, Nishiazabu 2-chome, Minato-ku Tokyo 106, Japan