Yashica TL Electro-X

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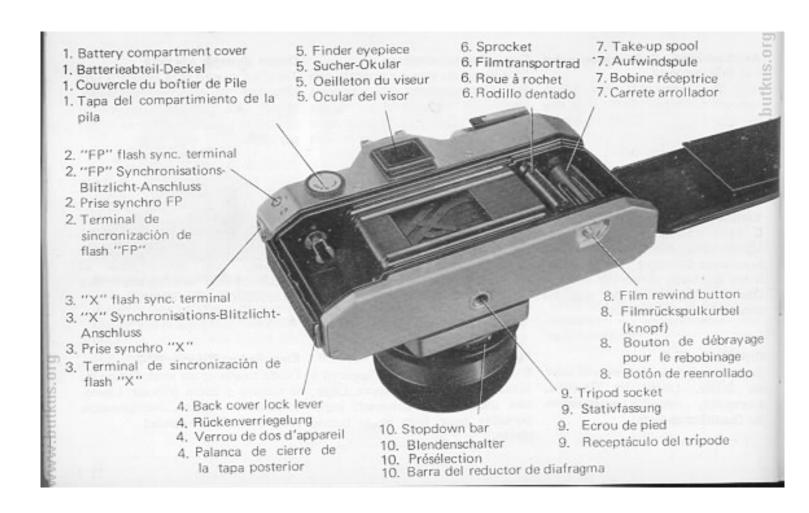


Yashica's electronic breakthrough--Electronic Exposure- -Readout has been incorporated in an SLR system camera for the first time!

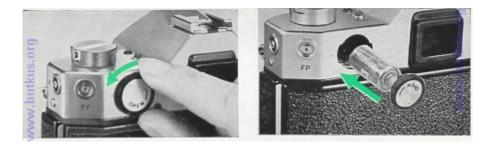
It's the transistorized IC (integrated circuit) in the Yashica TL Electro-X that pinpoints Thru-the-Lens exposure at stopped-down aperture. Indicator arrows in the finder give warning against over and under-exposure, signal how to make corrections. The result--most efficient correct exposure setting under all light conditions. No more eye straining needle-matching. No chance of the exposure system going out of order due to shock, jolts or exposure to heat or cold, because there are no moving parts, meter-needle or hair coil. The electronically-operated focal plane shutter also works wonders in assuring accurate exposure. It's a unique shutter system providing a range of intermediate speeds between settings--especially important with narrow-latitude color film...

DESCRIPTION





LOADING BATTERY



1. Remove the battery compartment cover by turning it in the direction of the arrow and install a 6V silver oxide battery. (Eveready No. 544 or equivalent). (webmaster: Mallory PX-28 is equivalent)

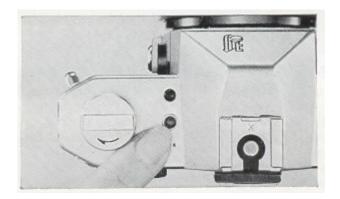
Click here for Yashica's battery page

[Taken from site http://www-unix.oit.umass.edu/~coreya/yashica/tlelectro.html

Batteries: It seems like most TL Electros use a pair of PX640 cells stacked. **However** it seems that some might take a single PX-28. It will be one or the other and fortunately there's an easy way to tell, based on the diameter of the battery compartment. Here's a simple method: Take a common AA cell and see if it fits into the hole at all. If it does, use a pair of PX640s. If it doesn't, use a PX28. The AA cell is between the diameter of the two, and if it will start to fit into the hole, then the hole diameter is one that fits the PX640. If the hole diameter is smaller, then use the PX28. Two PX640's stacked are the same height as a PX28, but the PX28 gives twice the voltage.]

2. Make sure that the (--) side faces inside. If the battery is installed in a reverse position, the Electronic Exposure Readout will not function. Close the battery compartment cover securely.

CHECKING BATTERY

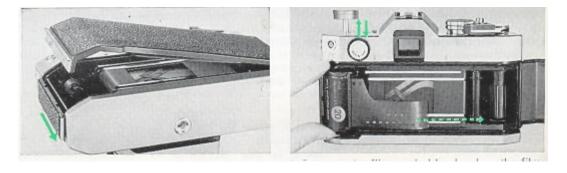


If the battery is weak, the Electronic Exposure Readout will not operate correctly. Before shooting, check the battery condition. Press the battery check button and when the green lamp lights, the battery has sufficient power to operate the exposure control system. Replace the battery when the green lamp does not light.

NOTES ON SILVER OXIDE BATTERY

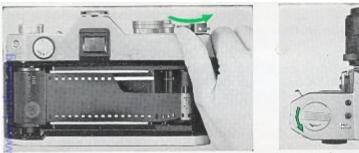
- · When the battery is installed incorrectly, 1) The green lamp will not light when the battery check button is depressed. 2) The shutter speed will be 1/1000 sec. when the shutter release button is depressed.
- · Do not throw used silver oxide battery into the fire, trash cans or waste receptacles.
- · Do not disassemble the silver oxide battery or leave it where children can get access to it.

LOADING FILM



- 1. Pull out the back cover lock lever and the cover will pop open. The exposure counter will be automatically set at S (start) mark.
- 2. Pull out the film rewind knob, place the film cassette into the film chamber and replace the rewind knob to its original position. Insert the film leader into one of the slots of the take-up spool.

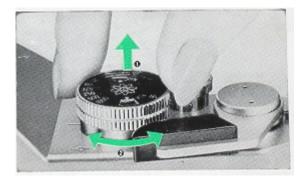
NOTE: Always load the film under a shade or in subdued light, never in direct sunlight.





- 3. Advance the film, making sure the sprocket teeth properly engage the perforations of the film. Close the back cover.
- 4. Wind the film advance lever and make blank exposures until the figure "1" appears in the exposure counter window. You're now ready for the first exposure.

SETTING FILM SPEED





- 1. Lift the film speed setting ring.
- 2. Turn the film speed setting ring to align the ASA/DIN speed of the film in use with the triangle index mark.

The ASA/DIN rating denotes the degree of light sensitivity of the film emulsion and is clearly indicated on the box or the instruction which comes with the film.

EXPOSURE SETTING





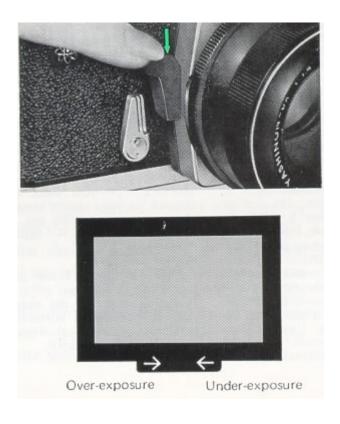
· Preselection of Shutter Speed In bright light, preselect the shutter speed by turning the shutter speed dial. Depress the exposure check lever and turn the aperture ring to obtain the correct exposure.

- •Preselection of Aperture In subdued light, preselect the aperture. Depress the exposure check lever and turn the shutter speed dial to obtain correct exposure.
- ·In either operation, correct exposure is assured.

ELECTRONIC SHUTTER SYSTEM



The electronic shutter system provides intermediate speed range at in-between setting. The shutter speed dial has clickstops at each setting between 1/1000 sec. and 1/30 sec.. When taking pictures either of fast moving subjects or in bright sunlight, it may be easier and better to preselect the shutter speed. Then, obtain correct exposure by turning the aperture ring. On the other hand, in the slower shutter speed range between 1/30 sec. and--index mark (approx. 2 sees.) there are no click-stops. When taking pictures in dim light, preset the lens opening. Then, obtain correct exposure by turning the shutter speed dial.



The red exposure warning arrows indicate exposure corrections.

Sight through the finder, keeping the exposure check lever depressed. One of the red UNDER or OVER exposure warning arrows appears in the lower part of the finder.

In the preselection of shutter speed, rotate the aperture ring for correction of exposure setting. And in preselection of aperture, adjust the shutter speed dial. I n either case, correct exposure is obtained when the arrows go out.

OVER-EXPOSURE

Turn the aperture ring or the shutter speed dial in the direction of the arrow in the viewfinder until the left exposure warning arrow goes out. If the arrow fails to turn off, use an ND filter.

UNDER EXPOSURE

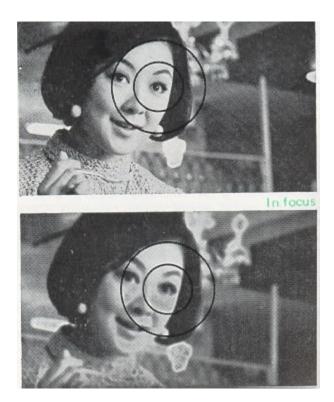
Turn the aperture ring or the shutter speed dial in the direction of the arrow in the viewfinder until the right exposure warning arrow goes out. If the arrow fails to turn off, use a larger aperture or a slower shutter speed. Or the use of a flash unit is recommended. When using a slow shutter speed under 1/60 sec., the use of a tripod is advised.

Light conditions & Subjects	Measuring Procedures	Shutter Speeds & Apertures		
Fair: Fast moving subjects	Preselection of shutter speed	1/1000, 1/500, 1/250 sec.		
Hazy: Moving subjects	Preselection of shutter speed	1/250 & 1/125 sec.		
Overcast: Rainy	Preselection of shutter speed	1/60 & 1/30 sec.		
Indoors: Dim light	Preselection of aperture	Select large aperture		
Special cases		"B" setting		

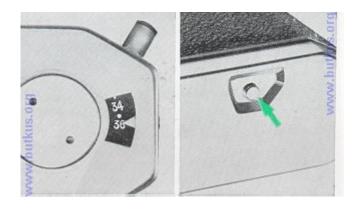
FOCUSING

For bright viewing and precise focusing, set the stopdown bar to "A" position. Look through the finder and turn the focusing ring until the image on the focusing screen appears clear and crisp.





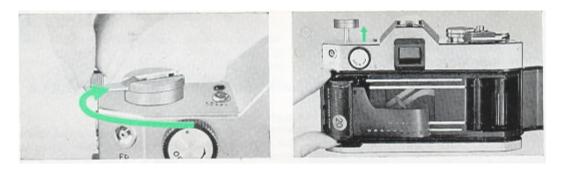
UNLOADING FILM



When the film has been completely exposed, rewind the film and take out the films cassette. If you should forget this procedure and open the back cover, the film will be fogged.

1. Do not try to advance the film. when a resistance is felt: it may tear or come loose from the cassette making it impossible to rewind. Push the film rewind button on the camera base...

2. Fold out the crank-handle on the film rewind knob and turn it in the direction of the arrow. A slight resistance will be felt when the film pulls off the take-up spool, but continue winding the crank-handle until you feel the film pulling away from the slot of the take-up spool.



3. Open the back cover and take out the film cassette.

FEATURES OF TL ELECTRO X

Lens: Auto Yashinon.DX`50mm f/1.47.element lens; stops clown to f/16

Shutter: Electronically operated focal plane shutter with speeds from B. SLOW (about 2 seconds) to 1/1000 sec.; intermediate shutter speed setting optional; self-timer plus FP.X sync.

Exposure Control: Thru-the-Lens CdS light measuring system; Electronic Exposure Readout (exposure warning arrows suggest exposure corrections): ASA range 25 - 800; a 6V silver oxide battery is used to power the exposure control system and electric-operated focal plane shutter (Eveready No. 544 or equivalent)

Viewfinder: Reflex viewfinder with microprism focusing spot, ground-glass collar for depth of field analysis; focusing from 0.5 meter (1.75 feet) to infinity; exposure warning lamps visible in the viewfinder

Film Transport: Ratchet-type, single-stroke film advance lever; automatic resetting exposure counter

Other Features: Battery checker, Mirror lock, Direct contact shoe, Multi-slot take-up spool for easy and fast loading

Lens Shade: 57mm slip-on type_

Filters: 55mm screw-in type

Dimensions: 151 x 96 x 96.4mm

Weight: 1050grs.

Models with f/1.7 and ft2.0 are also available.

SLOW SHUTTER "B" SETTING





When using shutter speeds slower than 1/30 sec., the use of a tripod and a cable release is recommended.

Caution: At an intermediate setting between SLOW and B settings, the Electronic Exposure Readout will not function. Do not set the shutter speed dial between SLOW and "B" settings.

"B" Setting

When a long exposure is required, set the shutter speed dial at "B" setting. At this setting, the shutter remains open over the duration the shutter release button is depressed. For long exposure, the use of a tripod and a cable release is recommended.

EXPOSURE SETTING WHEN SHOOTING AGAINST LIGHT



When shooting against light or photographing a subject near a window, or against an excessively bright background such as snow-covered landscapes, the main subject is liable to appear extremely dark (underexposed) if the exposure is set in the normal manner.

To obtain sparkling results in such case, approach your main subject and take exposure reading by seeing to it that the bright light in the background is warded off from the lens.

In case the main subject cannot be approached, it's necessary to give from twice to four times the normal exposure.

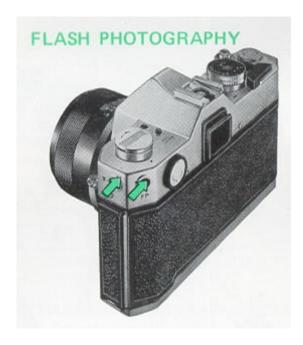
If the normal setting is f/16 at 1/125 sec., set the aperture at f/11 at 1/125 sec. or at f/11 at 1/60 sec.. In the above circumstance, disregard the left exposure warning arrow when taking the picture.

HOW TO HOLD THE CAMERA





- 1. Hold the camera and sight through the viewfinder.
- 2. For exposure setting, depress the exposure check lever with index or middle finger of the right hand and rotate the aperture ring with the thumb and index



·X FLASH SYNC. TERMINAL

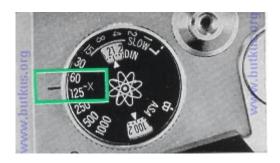
Two "X" Sync. terminals are provided. One of them is the Direct Contact Accessory Shoe, and the other on the side of the camera body. When using an Electronic flash or ordinary flash unit, connect the synchro cord to "X" terminal.

· FP FLASH SYNC. TERMINAL

When using ordinary flash unit with FP or M class bulbs, connect synchro cord to "FP" terminal.

The compact Yashica AG-D, is a dual use flash unit for AG type bulbs. Use it as a cordless flash unit by slipping it into the direct contact accessory shoe or as a conventional flash unit by connecting the synchro cord to the camera synchro terminal.

Flash Mark X When using an electronic flash unit, always set the shutter speed dial to this X setting. The shutter speed is set at about 1/90 sec.



Flash Terminal	Type of Flash Unit	1000 500 250 125 (-X) 60 30 15 8 4 2 1	B
FP	FP MF(AG-Type) M	POLICIO DE COMPANION DE COMPANI	
х	Electronic flash MF(AG-Type) M		

EXPOSURE SETTING



Correct exposure setting in flash photography is obtained through the guide number for flash bulb or electronic flash unit in use. The guide number is shown on the package of the flash bulb or on the body of electronic flash unit. Divide the guide number by the camera-to-subject distance.

Guide Number (32) =f/16 (Correct aperture) Distance (2 meters)

Guide Number (100) =15 1--f/16 (Correct aperture) Distance (6.6 feet)

"R" MARK



The red dot (R mark) is used when taking a picture with infrared film. For infrared photography, focus your camera in the ordinary manner and then set the distance reading to the R mark.

FILM PLANE MARK

The red mark on the camera top indicates the position of the film plane: Strictly speaking, the camera-to-subject distance means the distance from the film plane to the subject. In close-up photography, measure the distance

from the film plane mark to the subject.

SELF-TIMER

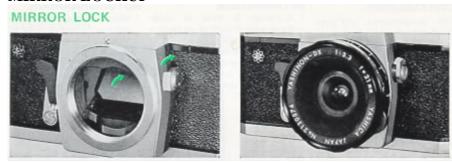


- 1. Give the film advance lever a full turn to charge the shutter.
- 2. Charge the self-timer by shifting the self-timer lever all the way down.
- 3. Depress the shutter release button and the self-timer trips the shutter at a delayed action of 8 to 10 seconds.

NOTES:

When the self-timer does not function, even if the shutter release button is depressed, it's because the shutter is not charged. Charge the shutter by advancing the film advance lever and press the shutter release button.

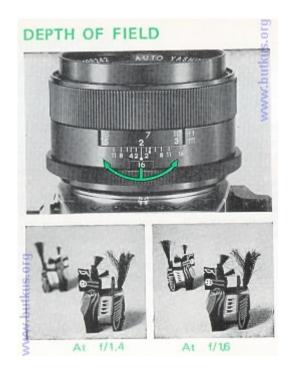
MIRROR LOCKUP



Push the mirror lock knob upward in the direction of the arrow to flip up the mirror and lock it in position. To return it to its original position, turn the knob down.

This mirror lock system permits mounting of ultra wide-angle lens.

DEPTH OF FIELD



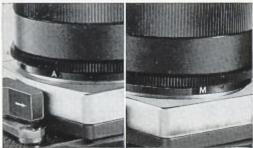
The area in the foreground and background over which objects appear acceptably sharp when you focus your camera on a subject at a given range is called the "Depth of Field." As shown here, the depth of field is more extensive when the lens is stopped down (right photo) than at full aperture (left photo). The depth of field can also be determined by referring to the depth of field scale on the lens barrel. If the subject is at a distance of two meters and an aperture setting of f/16 is selected. all objects within the range indicated by the figures 16 on both sides of the red index mark (approx. 1.5 to 3.2 meters) will appear acceptably sharp in the picture.

The depth of field is more extensive . . .

- · when the lens is stopped down.
- · when you focus your camera on a distant subject.
- · in the background than in the foreground.

PREVIEW OF THE DEPTH OF FIELD





To preview the depth of field at the preselected aperture, depress the exposure check lever and sight through the viewfinder. Always keep the stopdown bar on the lens barrel at "A" for depth analysis.

At this setting, the diaphragm remains fully open to assure maximum brilliance of the image in the finder at all times, except for the fraction of a second the exposure is made.

When the camera is used with extension bellows or tubes for macrophotography, the stopdown bar on the lens barrel should be set at the "M" position. The desired aperture can be set manually.

NO EXPOSURE FACTOR REQUIRED



The TL Electro-X features the Thru-the-Lens metering system which measures the average brightness of the light coming through the taking lens and exposure compensation is not required, when using any lens, or filter. Perfect exposure is assured every time.

The stopdown bar should be set at "M" position when the lens is used with extension bellows or tubes for macrophotography.__

INTERCHANGING OF LENSES



The Yashica interchangeable lenses from wideangle to telephoto feature screw-thread mounts and can be mounted or dismounted rapidly.

NOTES: You should interchange the lens in subdued light, never in direct sunlight.

A WIDE RANGE OF INTERCHANGEABLE LENSES



	-	 1.000	11.1.34.50	T See See See	See See	17.00	G.

Model	Diaphragm	Angle of View	Minimum Focus	Filter Size
Yashinon-DX f/3.3 21mm lens	Manual	92"	0.8m (2.5')	55mm screw-ir
Auto Yashinon-DX f/2.8 28mm lens	Automatic	75°	0.4m(1.25')	62mm screw-in
Auto Yashinon-DX f/2.8 35mm lens	Automatic	63"	0.4m(1.5')	52mm screw-in
Super Yashinon-DX f/2.8 35mm lens	Preset	63"	0.45m(1.5')	52mm screw-in
Auto Yashinon-DX f/2.8 100mm lens	Automatic	24"	1.2m (4')	52mm screw-in
Auto Yashinon-DX f/2.8 135mm lens	Automatic	18"	1.5m (5')	55mm screw-in
Super Yashinon-DX f/2.8 135mm lens	Preset	18"	1.5m (5')	55mm screw-i
Auto Yashinon-DX f/4 200mm lens	Automatic	12"20"	2.5m (8')	55mm screw-ii
Super Yashinon f/4.5 200mm lens	Preset	12"	3m (10')	55mm screw-ii
Auto Yashinon-DX f/5.6 300mm lens	Automatic	8*10'	4.5m (15')	58mm screw-i
Super Yashinon-R f/5.5 300mm lens	Preset	8*	8m (25')	62mm screw-in
Super Yashinon-R f/6.3 400mm lens	Preset	6*	9m (30')	72mm screw-i
Reflex Yashinon-DX f/5 500mm lens		5*	10m (35°)	
Super Yashinon f/8 600mm lens	Preset	4*	13m (42')	37mm drop-in
Super Yashinon f/8 800mm lens	Preset	3*	25m (82')	37mm drop-in
Auto Yashinon-DX Zoom f/4 80-160mm lens	Automatic	31 07 -15 10	2.5m (8')	62mm screw-i
Auto Yashinon Zoom f/4.5 75-230mm lens	Automatic	32°22'-10°46'	2.5m (9')	67mm screw-i
Yashinon-R Zoom f/4.5 75-230mm lens	Preset	32°22'-10'46'	2.5m (9')	67mm screw-in
Super Yashinon-R Zoom f/5.8 90-190mm Jens	Preset	26*52'-12*59'	1.8m(6')	55 mm screw-i

ACCESSORIES







Lens Hood Use of a lens hood is recommended for subjects in bright

Filter
Better overall results
can be obtained
through use of a filter

Extension BellowsEffective for extreme close-ups and macrophotography.

light, sea or snow scenes, and to prevent unnecessary stray light from falling on the lens.

when shooting sea or snow scenes, etc. under glaring sunlight and for obtaining special effects

The use of the bellows provides magnification of the image up to 2.4X the life-size.

(57mm slip-on type)

(55mm screw-in type)

(54mm slip-on type for f/1.7 and f/2.0 lens)

(52mm screw-in type for f/1.7 and f/2.0 lens)





Extension Tubes

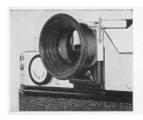
Useful for copying and Viewfinder close-up work. A set of This exclusive right-4 tubes can be used singly or in any combination for any degree of magnification up to maximum.

Right-angle

angle viewfinder slips on to the camera eyepiece and is designed for convenient viewing and focusing.

Microscope Adapter

The microscope adapter is used for microphotography. There is no need for compensation of exposure factor.



Eyesight-Adjustable Eye-cup

The eye cup has a frame to accept a lens of 18mm diameter. Mount the prescription flash unit. The PVC lens from your optician cord is housed within to the frame four comfortable viewing.



Yashica-Lite

AG D This compact flash gun can be used as either cordless flash gun or conventional the reflector section.



Grip/Tripod ST-7 Use it as a camera GRIP or a TRIPOD. Light, Compact, Versatile -indispensable for quality results.