

Cleaning the optics

Both lenses and reflex mirrors are made of finest optical glass. Clean them with the special brush, taking care never to hold the brush by its hairs, so that they do not become greasy. Whenever you change film, brush away any dust that may have gathered on the reflex system. The lens brush is supplied with every Tessina camera and is stored underneath the velvet base in the red and blue box.

Flash photographs

Attach the cable of the flash gun to contact 13. Turn dial 12, so that one of the 3 letters is opposite the index mark:

M = 20 milliseconds delay (flashbulbs)

F = 5 milliseconds delay (flashbulbs)

X = zero delay (electronic flash)

Special adapters enable you to fit a flash gun or an exposure meter to the camera.

OTHER TESSINA ACCESSORIES Tripod plate

Place the plate over the four rivets on the back of the Tessina, so that the two red dots coincide (Fig. 20, A). Slide the plate to the

Should the release fail to operate. Check if the sliding cap is fully opened, if the spring motor is completely wound or if the film is used up (see below).

End of the film

If the exposure counter shows 23 exposures of black and white or 18 exposures of color film, the film transport will automatically come to a stop, indicating the end of the film. If the Tessina cassette was improperly loaded, the end of the film may slip out of the cassette. The film transport will then continue to

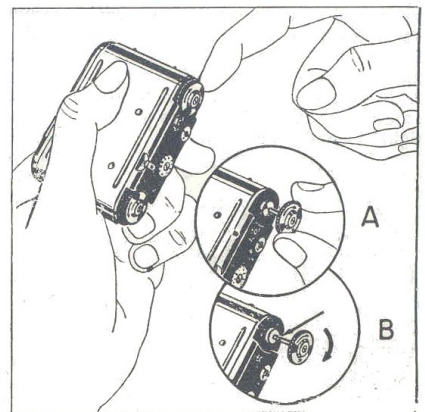
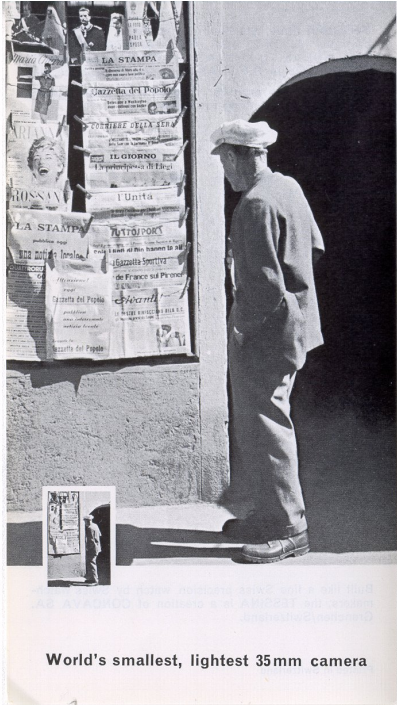


Fig. 6



World's smallest, lightest 35 mm camera

How many times have you missed a really exciting shot, because you did not have your camera with you? TESSINA is your answer.

The TESSINA 35 is an unbelievably compact and lightweight camera, which you carry in your pocket as conveniently as a wallet, watch, lipstick or pack of cigarettes, always ready for instant use – anytime, anywhere.

The TESSINA 35 L with coupled exposure meter offers you automatic light readings for absolutely precise exposures (see also opposite page).

The TESSINA 35 has a Swiss precision miniature motor that gives you fully automatic film transport, for sequences of 6–10 pictures without rewinding. Pressing the button takes the pictures, counts the exposures, transports the film and cocks the shutter automatically, readying your camera for the next shot. Regardless how fast moving your subject or how fleeting its expression, you capture it with your rapid-action TESSINA 35.

The TESSINA 35 uses any standard 35 mm film, color or black and white. You will never be short of film, no matter how far off the beaten track you travel.

The TESSINA 35 is amazingly economical. A roll of 35 mm film gives you almost $2\frac{1}{2}$ times as many pictures as a standard 35 mm camera. Just think what you save in the cost of film!

The TESSINA 35 gives you a far larger image than any other subminiature camera. Your pictures are perfectly suitable for bigger-than-lifeseize enlargements – $8\times 10''$, $16\times 20''$, $20\times 24''$ and beyond, well worth framing. You will be amazed at the critical sharpness, authentic contrasts and precise color fidelity.

The TESSINA 35 is custom-built with Swiss chronometer precision. Its jewelled mechanism with ruby stones eliminates friction and wear like a fine Swiss watch, is subject to the most rigid quality controls.

The TESSINA 35's shockproof construction withstands the most rugged use, for lifelong durability, carries a world-wide guarantee.

The TESSINA 35 is an endless source of pleasure for you and your friends. Unseen and unsuspected, it is also the ideal camera for candid shots. And for your business, the TESSINA serves as an accurate, everready pocket camera.

TESSINA 35 a technical miracle of Swiss chronometer precision.

The TESSINA 35 is still and by far the World's smallest ($2\frac{1}{2}''\times 2''\times 1''$) and lightest ($5\frac{1}{2}$ ounces) 35 mm camera, even smaller and lighter than any 16 mm camera, yet it offers you more feature choices than any other 35 mm camera:

Choice of preset exposure setting or automatic light readings for absolutely accurate exposures.

Choice of one-by-one shots or 6–10 rapid sequence shots with automatic film transport, without any rewinding

Choice of waist-level, eyelevel or 90° angle candid shots, with reflex and sportsfinder, field lens, 8x magnifier or 6x prism finder

Choice of preset distance setting or continuous focusing range from infinity all the way down to $9''$ for close-ups

Choice of electronically tested shutter speeds from $\frac{1}{2}$ to $\frac{1}{500}$ sec. plus B, with Swiss precision movement

Choice of M or X synchronization with attachable flashgun

Choice of apertures from f/2.8 to f/22, with color-corrected TESSINON 25mm lens

Choice of stylish chrome, black, red or gold color finish

Choice of haze, yellow, green, and 85 conversion red filters

Choice of carrying in zip bag, belt case, shirt, coat, hip pocket, folio, ladies purse, on neck chain or wrist strap

Choice of any standard 35 mm film, black and white or color

Choice of any finisher who processes 35 mm film

Choice of any 35 mm projector, with 35 mm cardboard or glass mounts and NEWLO Newton-ring-free glass

Choice of any 35 mm enlarger, for bigger-than-lifeseize enlargements up to $20\times 24''$ and beyond

TESSINA 35 – Tiniest camera for bigger-than-lifeseize enlargements.

Exclusive

Exclusive

Exclusive

Exclusive

Exclusive

Exclusive

Exclusive

Exclusive

Exclusive

Exclusive

Exclusive

The new automated TESSINA 35 L with cross-coupled exposure meter. A masterpiece of camera miniaturization



ASA (DIN) setting: Turn the dial at the bottom of the exposure meter for the correct ASA (DIN) rating of your film.

Coupling of exposure meter: Turn the f/stop dial to f/4, slide the exposure meter into the accessory clip coupling it with the f/stop dial.

Automatic readings: Turn the f/stop dial, which indicates the correct shutter speed on the coupled exposure meter – automatically.

Over exposures: If needle is to the right of $\frac{1}{500}$ sec., there is too much light and a smaller lens stop must be chosen.

Under exposures: If needle is to the left of $\frac{1}{500}$ sec., there is not enough light and the lens must be opened more or a slower shutter speed must be chosen.

TESSINA 35 – The subminiature for ...

- industry
- science
- investigation
- armed forces
- copy work
- micro-filming
- any other business application
- travel
- sport
- portraits
- family pictures
- close-ups
- candid shots
- any other personal pleasure

Loading of bulk film in the dark room

Remove the lid of the cassette and take out the spool. Cut off and discard the narrow film leader, then cut the film to the required length. Push the film end through one of the two slits of the spool (Fig. 8) until about 1" of film comes out on the other side. Then bend this end back into the second slit, so that the sprockets engage in the film perforations. Make sure that the film cannot be dislodged by mere pulling. Hold the film by the edges and roll it around the spool. Slide the

spool back into the cassette, so that a shortfilm leader comes out through the lips (Fig. 9), then put the lid on again (Fig. 10).

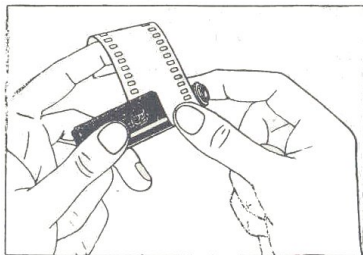


Fig. 9

posures. While turning the knob, the protruding pin gradually disappears. Cut the film by pulling the small knob with the knife all the way out (Fig. 18). Open the selfloader and take out both 35

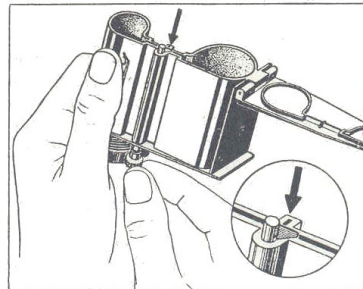


Fig. 15

mm cartridge and loaded Tessina cassette. For thicker black and white film (Plus X, Tri X, etc.) see below. Color film

Follow exactly the same procedure except for the following:

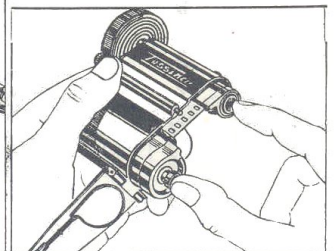


Fig. 16

MAY 25 1966

**Technical
features**

Reflex viewing - direct viewfinder - Tessina 25 mm f/2.8 (Lanthan) lens - automatic sequences of 5-8 shots without rewinding - all distances from infinity to 1 foot - all speeds from 1/500 to 1/2 sec. - synchronization for flash F-M-X.

Tessina

Automatic 35 mm.

Made in Switzerland

Loading with the daylight selfloader

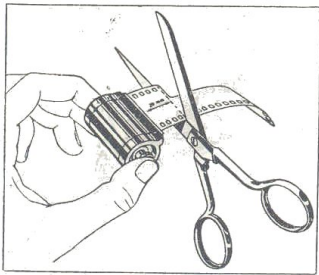


Fig. 11

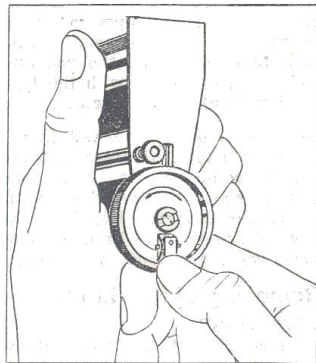


Fig. 12

This practical accessory permits easy transfer of any 35 mm film from a standard cartridge into a Tessina cassette.

Black and white film

Unwind about $\frac{3}{4}$ " (2 cm) of film from the original cartridge. Cut off and discard the narrow filmleader (Fig. 11). Fasten the film to the spool of the special Tessina cassette (see page 12), put the spool back into the cassette and close the lid.

Press the little lever on the knob of the selfloader, so that the red dot is in upward position (Fig. 12). Turn the knob back (opposite direction of arrow) to its starting stop (Fig. 13). A small pin becomes gradually visible. When it protrudes about $\frac{1}{4}$ ", the knob is in loading position.

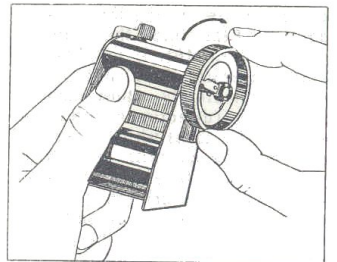


Fig. 13

The logo for the Tessina camera, featuring the word "Tessina" in a stylized, italicized red script font, with a thick red horizontal bar above and below the text.

**The subminiature camera
with the largest ever image!**



Built with traditional Swiss precision, the Tessina is the world's most compact reflex camera, giving you all the excellent features of the popular 35 mm size. Thanks to the Tessina, you can take three times as many 14×21 mm pictures on 35 mm film – the most economical photos you have ever taken . . . and you will find 35 mm film on sale **everywhere**, both for black and white and color photos.

After the knob has been turned back to its starting stop and the film cassettes have been inserted

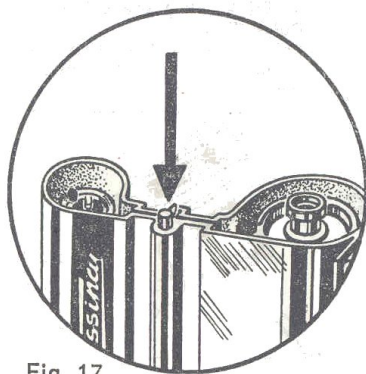


Fig. 17

into the selfloader, push the little lever fixed to the knob, so that the red dot is in **downward** position. Turning the knob to its final stop transfers about $14\frac{1}{2}$ " of color film from the 35 mm cartridge into the Tessina cassette, for 18 exposures (Fig. 19).

Note: It is recommended that thicker black and white films such as Plus-X and Tri-X are also loaded like color film, i.e. with the red dot in downward position, i.e. for 18 exposures only. Please note that before turning the knob back to its starting stop for loading of either color or black and white film, the red dot of the lever must **always** be in **upward** position. Otherwise the knob may be blocked after a few turns and will only permit loading of a short film strip. **Make sure**

Tessina Cassettes

While photographic dealers will offer Tessina cassettes that are already loaded with certain types of film, a daylight self-loader (see page 14) enables you to load your Tessina cassettes yourself with any 35 mm film.

Film length

The Tessina cassette holds $16\frac{1}{2}$ " (41 cm) of black and white film or $14\frac{1}{2}$ " (36 cm) of the thicker color film. For cutting the film in the dark room it is recom-

mended to prepare two rulers for these two film lengths. May we suggest that you practice this first with the dummy film in the Tessina cassette, which is supplied with each self-loader.

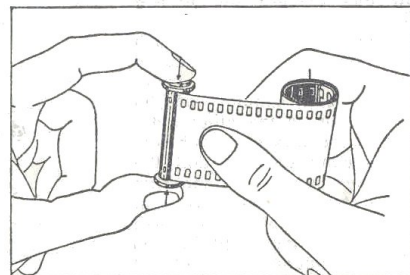


Fig. 8

The new automated **TESSINA 35 L** with cross-coupled exposure meter



Life size

Tessina 35 mm



TESSINA 35 = THE ONLY SUBMINIATURE THAT REALLY MAKES SENSE.

TESSINA Accessories



TESSINA tripod plate with neck chain: For carrying your TESSINA 35 around your neck or mounting it on a table clamp or tripod



TESSINA wrist strap: You can wear the TESSINA 35 on your wrist for unsuspected snapshots. And you can even attach a 17 Jewel Swiss watch, for the world's only wrist-watch-camera combination



TESSINA leather cases: Feltlined, hardcover everready case attaches to shoulder strap or belt; zip bags w/hand strap for TESSINA 35 only or with prismfinder, magnifier or film cassettes



TESSINA interchangeable finders: Reflex and sports finder, field lens, 8x magnifier for critical focusing in close-up work, 6x prismfinder for eyelevel focusing of vertical or horizontal pictures



TESSINA daylight self-loader: With this practical accessory you can bulkload any standard 35 mm film



TESSINA flashgun: Attaches to accessory bracket or clip



TESSINA filters: You have your choice of haze, yellow, green, red and 85 conversion filters

TESSINA 35 — The swiss pocket camera for both business and pleasure

TESSINA films: Standard 35 mm film is available pre-packaged: ADOX 20 ASA, ADOX 40 ASA, ADOX 100 ASA, KODAK Tri-X 400 ASA, KODAK Kodachrome II, KODAK Ektacolor S, KODAK High speed Ektachrome, etc.

TESSINA slide mounts: Cardboard or glass mounts with NEWLO Newtonring-free glass

U.S. Agents:



34-11 62nd St. • P.O.B. 427
WOODSIDE, NY 11377
(718) 565-0004

Built like a fine Swiss precision watch by Swiss watch-makers, the TESSINA is a creation of CONCAVA SA, Grenchen/Switzerland.

Printed in Switzerland

Brief instructions for use

Tessina

A. Loading

35 mm Miniature Camera Auto-Reflex

1. Push catch on side of camera to position "O" (open) and remove back.
2. Pull out rewind knob "R" **completely**, beyond its first notch.
3. Take loaded Tessina cassette and insert loose end of film under the black spring clip of the take-up spool, so that its sprockets engage in the perforations.
4. Unwind just enough film to engage the sprockets of the film transport gear in the perforations, and drop Tessina cassette in its place.
5. Replace back and lock catch on side of camera again.
6. Push rewind knob "R" slightly back into its first notch and turn it gently in the direction of the arrow until you feel a slight resistance indicating that film is tight, then push it completely back.
7. Pull out winding knob and turn it in the direction of the arrow, until the built-in spring motor is fully wound.
8. Turn exposure counter so that its red dot coincides with the red index mark.
9. Pull sliding cap to the left until both viewing and taking lenses are **completely** uncovered.
10. Press release button twice, which takes two exposures **and** transports film exposed during loading. The center of the rewind knob must turn, indicating that film is transported. The camera cannot be released if sliding cap is only partly opened.

B. Picture taking

1. Set both exposure speed dial (by turning in the direction of the arrow) and diaphragm dial, preferably by using an exposure meter.
2. Frame your subject on the groundglass of the reflex system and turn the distance dial until the image is critically sharp.
3. Press release button for taking picture.
4. Film is transported automatically after each exposure and you can take up to eight exposures (depending on type of film used) **without** rewinding. (Should the release button fail to function, the reason may be one of the following :
 - the sliding cap is not completely opened ;
 - the spring motor is not wound up.)

C. Removing exposed film

After up to 23 black and white or 18 color exposures, the exposed film must be rewound.

1. Raise lever "R".
2. Pull out rewind knob "R" **to its first notch only** and turn it in the direction of the arrow until the whole film is rewound.
3. Remove back as described under loading.
4. Pull out rewind knob "R" **completely**, beyond the first notch.
5. Remove Tessina cassette.

CONCAVA S.A., Casa Torre, CASSARATE-LUGANO (Switzerland)

Printed in Switzerland

MAY 25 1966

Brevi istruzioni per l'uso



Automatica 35 mm., formato 14 × 21

A. Come introdurre la pellicola

1. Levate il coperchio spingendo il paletto nella direzione di « O ».
2. Fate uscire completamente il bottone di trasporto « R » fino al suo arresto.
3. Introducete l'inizio della pellicola sotto la linguetta della bobina d'avvolgimento in modo che la perforazione faccia presa da ambo le parti nei denti d'arresto.
4. Fate uscire la lunghezza di pellicola necessaria per poter porre la bobina piena nella sua scanalatura, controllate che due denti dell'ingranaggio siano fissati nella perforazione della pellicola.
5. Applicate il coperchio fissandolo da una parte sulle due punte e chiudendo il paletto dall'altra.
6. Girate lentamente la molletta « R » fino a quando incontrerete una leggera resistenza e poi fatela rientrare.

B. Come preparare l'apparecchio per la presa fotografica

1. Fate uscire l'altra molletta, quella della bobina vuota, e caricate il meccanismo nella direzione della freccia.
2. Fissate il conta-fotografie a zero, punto rosso su punto rosso.
3. Spingete il paletto in modo che i due obiettivi siano completamente scoperti.
4. Premete due volte lo scatto per far avanzare il tratto di pellicola esposto durante la sua introduzione.
5. Regolate il tempo di esposizione e il diaframma.
6. Scegliete l'inquadratura, regolate la purezza dell'immagine sulla lente smerigliata girando il dischetto della distanza.
7. Premete lo scatto. (Se il meccanismo è caricato completamente la pellicola viene trasportata automaticamente e voi potete fare 5 fotografie una dopo l'altra.)

C. Come levare la bobina

Dopo 23 fotografie in bianco/nero o 18 a colori si deve riavvolgere la pellicola esposta.

1. Tenete sollevata la leva « R ».
2. Fate uscire la molletta « R » fino al suo primo punto d'arresto e fatela girare nel senso della freccia, fino a quando tutta la pellicola sarà riavvolta.
3. Levate il coperchio.
4. Fate uscire completamente la molletta « R » oltre il primo punto d'arresto.
5. Levate la bobina.

Se lo scatto non funziona, ciò è dovuto alle cause seguenti :

- a) Il paletto è chiuso o non completamente aperto.
- b) Il meccanismo non è caricato.
- c) La pellicola è completamente esposta.

CONCAVA S.A., Casa Torre, CASSARATE-LUGANO (Svizzera)



For your family album: vivid warmth and color make the picture alive.

triple synchronization

TESSINA accessories

TESSINA dimensions weight

recessed in camera body which forms a lens hood.

M, F and X for electronic flash and flashbulbs.

magnifier 8×1, prism finder 6×1, field lens, daylight selfloader, compact leather case with zipper, wrist strap, neck chain attachment with tripod socket, accessory clips for exposure meter and flash gun, Per-O-Color frames for slides.

28×52×68 mm (1×2×2½")
approx. 5 ounces.

With the **Tessina**

world's smallest 35

Built like a fine Swiss precision watch by Swiss watchmakers, the TESSINA is a creation of
CONCAVA S. A., Grenchen, Switzerland

U.S. Agents:
KARL HEITZ, Inc.
480 Lexington Avenue
NEW YORK 17, N.Y.
Yu-kon 6-4920



Printed in Switzerland

Tessina

35 mm

World's tiniest
and only fully
automatic
reflex camera!



Switzerland's new camera sensation!

Open the lid of the selfloader (Fig. 14). Push the small knob down and turn the triangular knife attached to it out of the way, i.e. parallel to the film channel (Fig. 15). Place both the Tessina cassette and the 35 mm cartridge in their places, while sliding the connecting film into the film channel (Fig. 16). If the Tessina cassette does not go down completely, turn the large knob (direction of arrow, up to half a turn) while pressing down the cassette, until it moves into place. Turn the knife back to its original position and pull it up just so far that you can close the lid again.

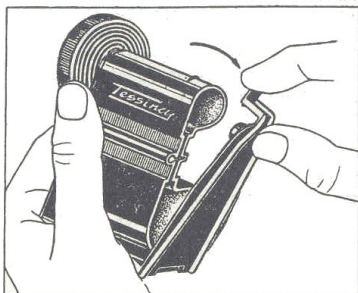


Fig. 14

Now turn the large knob (direction of arrow) until it reaches the final stop. This transfers about 16 1/2" of black and white film from the 35 mm cartridge into the Tessina cassette, for 23 ex-

It is recommended to store self-loaded Tessina cassettes for at least 10 days in their light-proof metal can before use. This will give the film a chance to adjust to the new and much smaller film curl. **Make sure that the cassette and can are marked with the type of film contained therein.**

Loading of partly exposed film
Load as usual. Depress release button while closing the lens cover, so that the release is no longer blocked. The film can now be advanced to its unexposed part, while the lens is covered.

Removing of film in the dark room

Remove the lid and take out the

spool. Fix a clip to the film-end, unroll the film and detach it completely from the spool. Fix a second clip to the beginning of the film, which makes it ready for processing in the developing tank.

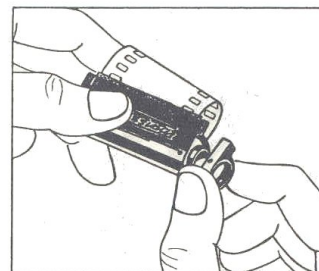


Fig. 10



Für das Familionalbum: farbenprächtige und lebensnahe Aufnahmen.

Das reichhaltige Zubehör



Die Kette mit der Stativplatte dient zum Tragen der Kamera um den Hals oder zur Fixierung auf dem Stativ oder der Blitzhalteschiene.



Mit dem Lederband kann die Kamera wie eine Armbanduhr am Handgelenk getragen werden.



Zur Wahl stehen das robustere Sportetui sowie das kleine Luxus-etui mit Reißverschluss. Eine größere Ausführung davon nimmt die Kamera mit Prisma oder 8x-Lupe auf.



Die 8x-Lupe erlaubt sehr genaue Einstellung über die Mattscheibe insbesondere im Nahbereich.



Das Pentaprisma mit 6facher Vergrößerung gibt das seitenrichtige Bild. Besonders geeignet für Queraufnahmen.



«Das Tageslicht-Filmpulvergerät erlaubt jegliches 35mm Filmmaterial in die Tessina-Kassette umzuspielen.»



Mit der Blitzhalteschiene in Verbindung mit der Stativplatte können Sie jedes Blitzgerät, ob groß oder klein einsetzen.



Der Normalschuh erlaubt jegliches Zubehör aus dem 35mm-Programm aufzunehmen.

Zurzeit sind folgende Aufsteckfilter verfügbar: rot/gelb/grün/UV sowie Konversionsfilter
Diarrähmchen: Perrocolor Metallrähmchen mit Gläsern für Diaspositive, Karton-Rähmchen, selbstklebend

NEU: Der aufsteck- und kuppelbare Belichtungsmesser auf Sileniumzellenbasis.

Dieser ultraflache Belichtungsmesser wird neben dem Sucher auf die Kamera aufgeschoben und ist dann mit dem verzahnten Blendenrad gekuppelt. Die Einkuppelung erfolgt bei Blende 4.

Der Belichtungsmesser gibt dann die einzustellenden Belichtungszeiten $\frac{1}{320}$, $\frac{1}{125}$ und $\frac{1}{500}$ an. Die dazwischen liegenden Werte sind durch Markierungsstriche gekennzeichnet.

Ein Einstellrad auf der Bodenfläche des Belichtungsmessers erlaubt die Einstellung der Empfindlichkeit in DIN/ASA des jeweils verwendeten Filmes.



Mit der **Tessina**
sind alle Chancen auf Ihrer Seite

Die TESSINA ist ein Schweizer Präzisionsprodukt, hergestellt in Zusammenarbeit mit der Uhren-Präzisionsteilfabrik W. SIEGRIST & CIE. AG. in Grenchen
CONCAVA A.G., Lugano (Schweiz)

Printed in Switzerland

Die kleinste automatische Reflex-Kamera der Welt!

KING SIZE

Life size

FILT

Tessina 35 mm

How many times have you missed a really exciting shot because you did not have your camera with you?

The TESSINA is a compact, lightweight camera that you always carry in your pocket, as easily and naturally as your lighter or your keys!

The TESSINA reflex camera is "ever ready" in every way. You will never be held up for film, however far off the beaten track you travel. Any standard 35 mm film, either color or black and white, will fit it!

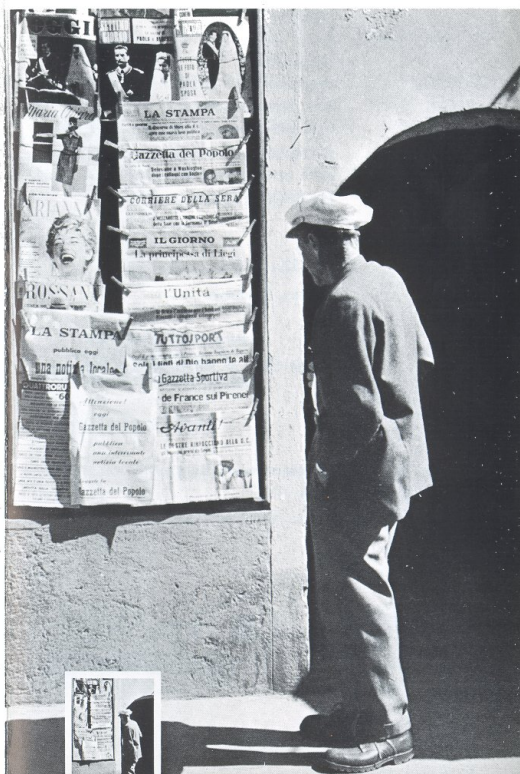
The TESSINA is amazingly economical: an ordinary roll of film will give you almost three times as many TESSINA pictures. Think what you save in the cost of film!

The TESSINA gives you by far the largest image ever, of any "subminiature" camera. The 14×21 mm format offers unlimited possibilities for enlargement and your best shots can be made into 8×10", 16×20", 20×24" (and up!) blowups, well worth framing! You will be amazed at the sharpness, quality and contrast you achieve with your TESSINA.

Made by Swiss watchmakers, the TESSINA is built with meticulous precision and, like any fine quality watch, has a jewelled mechanism.

The TESSINA is fully automatic. This means that you can take 5 to 8 shots without rewinding! However fast-moving your subject, however fleeting its expression, you will not fail to capture it!

Your subminiature TESSINA is an endless source of amusement. Unseen and unsuspected, it is the ideal camera for candid shots. In your hand it could be taken for your watch, hung round your neck it could be your exposure meter, and it is tiny enough to tuck into a lady's purse or a man's shirt pocket!



Perfect Tessina shot! Please note the crisp sharpness of the picture, with the title of every paper clearly legible.

A technical miracle, the TESSINA offers you all the basic assets of the most complete large-sized reflex cameras:

image dimensions
35 mm films

14×21 mm on standard 35 mm film.
photographic dealers will sell the following films in TESSINA cassettes:
ADOX KB-14° -17° DIN / 16-32 ASA/
100 ASA
black and white;
EKTACHROME, color;

In preparation:
AGFA, ANSCO, KODACOLOR, KODACHROME, FERRANIA, TELCOLOR.

Thanks to the TESSINA daylight self-loader (accessory), you can load any 35 mm film into your TESSINA cassettes. Capacity: black and white film = 23 exposures; color film = 18 exposures. groundglass for easy viewing, accurate framing, critical focusing and depth-of-field control.

reflex viewing

sports finder

for picture taking of fast moving subjects.

parallax-free

continuous focusing from infinity to ultra close-ups.

for any speed

$\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{15}$, $\frac{1}{30}$, $\frac{1}{60}$, $\frac{1}{125}$, $\frac{1}{250}$, $\frac{1}{500}$ and B.

fully automatic

5 to 8 shots in a row without rewinding — ideal for shooting rapid action sequences.

TESSINON lenses

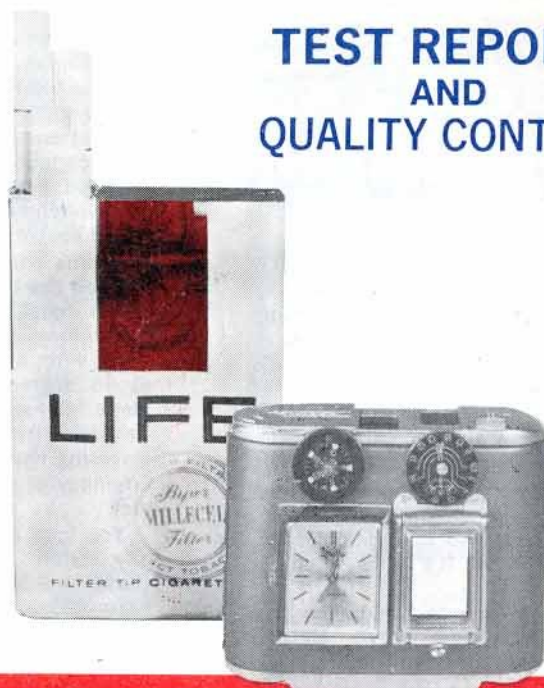
pair of TESSINON 25 mm f/2.8 viewing and taking lenses. Diaphragm stops to f/22. High resolving power of Lantham glass guarantees razor sharp images. New process anti-reflection coating reduces ultra-violet light rays to give full warmth to color film, thus dispensing with the need for a haze filter. Lens is

Tessina 35



**ALL PHOTOGRAPHIC
PUBLICATIONS AGREE...**

**TEST REPORTS
AND
QUALITY CONTROLS**



WORLD'S SMALLEST, LIGHTEST 35MM AND SUBMINIATURE CAMERA

modern PHOTOGRAPHY

... results far superior to any ultra or sub-miniature ... 35mm film ... processed in any 35mm tank ... any enlarger having a standard 35mm carrier ...

POPULAR PHOTO- GRAPHY

... extremely well conceived and engineered ... Swiss workman's discipline which is put into timepieces became evident in the Tessina ...

buyer's guide reports

... uses standard 35mm film ... jewelled film advance and shutter ... compares to watch-like accuracy ... a quality camera indeed ...

POCKET CAMERA PHOTOGRAPHY

... clockwork precision ... versatility appeals to the pocket camera enthusiast ... quality of enlargement is best of any pocket camera ...

The Moore-Neubauer Report

... marvel of miniaturization ... adds mighty mouse meter ... off the wrist or from the belt ... 8-10 frames on one winding ...

POCKET STUDIO

... at last the ideal personal camera ... professional quality results in both black and white and color ...

Lab report FIELD CHECK

... precision device ... excellent 8 x 10"s ... clear sharp prints ... functioning with all systems A-OK ...

Lab report INSTRUMENT READOUTS

... watchmakers' touch is evident ... a very clever design with every cubic centimeter being utilized ... confidence-inspiring, utilization of space without undue miniaturization of parts ...

CAMERA 35

... the ultimate in fine workmanship to reduce bulk without reducing film size ... came through the most difficult tests with flying colors ... if camera size is a factor, Tessina is the hands down winner ...

35mm PHOTO- GRAPHY

... small and light and like a wrist watch ... versatile system of photography ... parallax corrected focusing down to 9" ...

U. S. CAMERA

... image sharpness is boarding on the fantastic ... tiny negative can be blown up to a sharp grainless 20 x 24" print ... quality is superb ... it meets professional standards ...

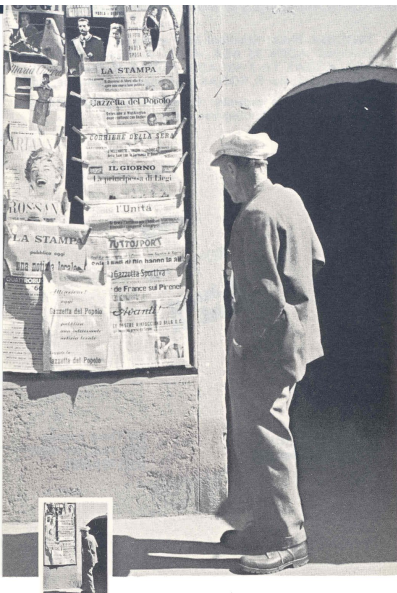
N P National X Photographic Exchange

... the ideal candid sequence camera ... close to 400 precision parts ... ruby jewelled movement ... Swiss watchmakers' gem ... a precision photographic instrument ...

PMI Photo Methods for Industry

... I use a Tessina 35L ... with 14 x 21mm frame size ... for the larger film area ... which resolves more detail with the high speed films that are often necessary ...

**TINIEST 2½ x 2 x 1" CAMERA, FOR LARGER THAN LIFESIZE PICTURES,
UP TO 20 x 24" AND BEYOND**



World's smallest, lightest 35 mm camera

How many times have you missed a really exciting shot, because you did not have your camera with you? TESSINA is your answer.

The TESSINA 35 is an unbelievably compact and light-weight camera, which you carry in your pocket as conveniently as a wallet, watch, lipstick or pack of cigarettes, always ready for instant use – anytime, anywhere.

The TESSINA 35 L with coupled exposure meter offers you automatic light readings for absolutely precise exposures (see also opposite page).

The TESSINA 35 has a Swiss precision miniature motor that gives you fully automatic film transport, for sequences of 6–10 pictures without rewinding. Pressing the button takes the pictures, counts the exposures, transports the film and cocks the shutter automatically, readying your camera for the next shot. Regardless how fast moving your subject or how fleeting its expression, you capture it with your rapid-action TESSINA 35.

The TESSINA 35 uses any standard 35 mm film, color or black and white. You will never be short of film, no matter how far off the beaten track you travel.

The TESSINA 35 is amazingly economical. A roll of 35 mm film gives you almost 2½ times as many pictures as a standard 35 mm camera. Just think what you save in the cost of film!

The TESSINA 35 gives you a far larger image than any other subminiature camera. Your pictures are perfectly suitable for bigger-than-lifesize enlargements – 8×10", 16×20", 20×24" and beyond, well worth framing. You will be amazed at the critical sharpness, authentic contrasts and precise color fidelity.

The TESSINA 35 is custom-built with Swiss chronometer precision. Its jewelled mechanism with ruby stones eliminates friction and wear like a fine Swiss watch, is subject to the most rigid quality controls.

The TESSINA 35's shockproof construction withstands the most rugged use, for lifelong durability, carries a world-wide guarantee.

The TESSINA 35 is an endless source of pleasure for you and your friends. Unseen and unsuspected, it is also the ideal camera for candid shots. And for your business, the TESSINA serves as an accurate, everready pocket camera.

TESSINA 35 a technical miracle of Swiss chronometer precision.

The TESSINA 35 is still and by far the World's smallest (2½"×2"×1") and lightest (5½ ounces) 35 mm camera, even smaller and lighter than any 16 mm camera, yet it offers you more feature choices than any other 35 mm camera:

Choice of preset exposure setting or automatic light readings for absolutely accurate exposures.

Choice of one-by-one shots or 6–10 rapid sequence shots with automatic film transport, without any rewinding

Choice of waist-level, eyelevel or 90° angle candid shots, with reflex and sportsfinder, field lens, 8x magnifier or 6x prism finder

Choice of preset distance setting or continuous focusing range from infinity all the way down to 9" for close-ups

Choice of electronically tested shutter speeds from 1/2 to 1/500 sec. plus B, with Swiss precision movement

Choice of M or X synchronization with attachable flashgun

Choice of apertures from f/2.8 to f/22, with color-corrected TESSINON 25mm lens

Choice of stylish chrome, black, red or gold color finish

Choice of haze, yellow, green, and 85 conversion red filters

Choice of carrying in zip bag, belt case, shirt, coat, hip pocket, folio, ladies purse, on neck chain or wrist strap

Choice of any standard 35 mm film, black and white or color

Choice of any finisher who processes 35 mm film

Choice of any 35 mm projector, with 35 mm cardboard or glass mounts and NEWLO Newton-ring-free glass

Choice of any 35 mm enlarger, for bigger-than-lifesize enlargements up to 20×24" and beyond

TESSINA 35 – Tiniest camera for bigger-than-lifesize enlargements.

Exclusive

Exclusive

Exclusive

Exclusive

Exclusive

Exclusive

Exclusive

Exclusive

Exclusive

Exclusive

Exclusive

The new automated TESSINA 35 L with cross-coupled exposure meter. A masterpiece of camera miniaturization



ASA (DIN) setting:

Coupling of exposure meter:

Automatic readings:

Over exposures:

Under exposures:

Turn the dial at the bottom of the exposure meter for the correct ASA (DIN) rating of your film.

Turn the f/stop dial to f/4, slide the exposure meter into the accessory clip coupling it with the f/stop dial.

Turn the f/stop dial, which indicates the correct shutter speed on the coupled exposure meter – automatically.

If needle is to the right of 1/500 sec., there is too much light and a smaller lens stop must be chosen.

If needle is to the left of 1/500 sec., there is not enough light and the lens must be opened more or a slower shutter speed must be chosen.

TESSINA 35 – The subminiature for ...

- industry
- science
- investigation
- armed forces
- copy work
- micro-filming
- any other business application

- travel
- sport
- portraits
- family pictures
- close-ups
- candid shots
- any other personal pleasure

Jedermann besitzt einen Photoapparat – aber wenn man ihn braucht, ist er nicht zur Hand! ... So verpaßt man die schönsten Gelegenheiten!

Die TESSINA ist die Reflex-Kamera für 35 mm Film, die Sie, zufolge ihrer außerordentlichen Kleinheit in Ihrer Tasche mittragen können, so daß Sie diese Kamera im richtigen Moment, wie die Schlüssel oder das Feuerzeug, vorfinden! Die TESSINA ist «allzeit bereit»: denn die Filme sind überall erhältlich, weil jeder 35 mm Film, farbig oder schwarz/weiß, paßt!

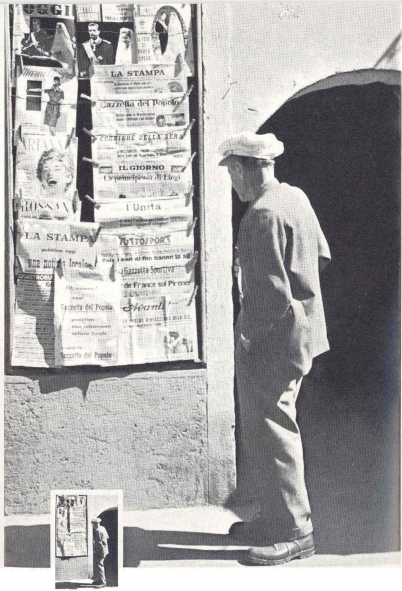
Die TESSINA ist ungewöhnlich sparsam: aus einer handelsüblichen Filmrolle gewinnt man fast dreimal mehr TESSINA-Aufnahmen. Mit andern Worten ist der Film dreimal billiger.

Die TESSINA ergibt das größte, je mit einem so kleinen Apparat aufgenommene Bild. Das Format 14×21 mm bietet wahrhaft erstaunliche Vergrößerungsmöglichkeiten. Die bestgelungenen Aufnahmen lassen sich zu hervorragenden Bildern von 13×18 cm oder 18×24 cm, ja von 30×40 cm vergrößern. – Sie sind auch dann noch von einer vorzüglichen Schärfe und einem so großen Tonreichtum, daß sie wert erscheinen, eingerahmt zu werden.

Die TESSINA ist mit einer Transport-Automatik versehen: 5–8 Bilder können hintereinander mit einem einzigen Aufzug aufgenommen werden. Alle bewegten Objekte, so schnell die Bewegung beim Sport auch sei, die TESSINA hält immer das pulsierende Leben fest. Das Verschlüßwerk, das von geübten Uhrenfachkräften hergestellt wird, ist in Rubinen gelagert und von höchster Präzision.

Die elegante Kleinheit der TESSINA gibt zudem vielseitige Möglichkeiten – besonders diejenige, ganz unbemerkte Aufnahmen zu machen!

Wenn man die TESSINA am Handgelenk trägt, scheint man eine Uhr aufzuziehen; um den Hals gehängt, wirkt sie wie ein Belichtungsmesser; in der Tasche des Vestons des Herrn aber auch in der Handtasche der Dame, wird sie sich mit einem kleinen Platz begnügen!



Das erstaunliche an der TESSINA! Beachten Sie die außerordentliche Schärfe (Klarheit) des Bildes; alle Titel der abgebildeten Zeitschriften sind gut lesbar.

Ein technisches Wunder: Die zweiäugige TESSINA-Automatic 35 mm bietet sämtliche Möglichkeiten der großen, ausgeklügelten Reflex-Kameras!

Bildformat	14×21 mm mit perforiertem 35 mm Film
Filmpatrone	Im Handel sind zurzeit folgende Filme in TESSINA-Patronen abgefüllt erhältlich: ADOX KB –14° –17° 21° DIN EKTACHROME-X-Color Umkehrfilm Tageslicht und Kunstlicht 19° DIN In Vorbereitung: TRI-X Ektacolor ANSKO, KODACOLOR. Mit dem TESSINA-Umspuler können Sie aber jegliches 35 mm Filmmaterial verwenden und selbst auf TESSINA-Patronen umspulen. Bei schwarz/weiß-Film = 23 Bilder Bei Farbfilm = 18 Bilder
Reflexsucher	Bildausschnitt, Komposition und Schärfe auf der Mattscheibe durch klappbaren Schacht besonders klar.
Durchsichtsucher	Mit Leuchtrahmen für Schnappschüsse und Sportaufnahmen.
alle Entfernungen	Von Unendlich bis zur Nahaufnahme 30 cm. Besonders geeignet zur Aufnahme von Schriftstücken.
Belichtungen	Alle Belichtungszeiten B, $\frac{1}{25}$, $\frac{1}{40}$, $\frac{1}{60}$, $\frac{1}{125}$, $\frac{1}{250}$ und $\frac{1}{500}$ Sek. Bis zu 8 Bilder hintereinander ohne neu aufzuziehen ermöglicht eine filmhafte Folge von Einzelaufnahmen.
automatische Bildfolge	
TESSINON-Objektiv	Das TESSINON-Objektiv 1:2,8/25 mm aus Lanthan-Gläsern, Blende 2,8 bis 22 besitzt ein großes Auflösungsvermögen, daher die scharfen Bilder! Ein

neuer Linsenbelag verhindert die Reflexe, schwächt das violette Licht, gibt bei Farbfilmen eine wärmere Zeichnung. Die Verwendung eines UV-Filter ist daher unnötig. Die Optik ist im Innern der Kamera geschützt eingebaut (Gegenlichtblende).

Blitz-Synchronisation

2 Kontaktpunkte für M und X-Synchronisation für Blitzlampen und Elektronenblitz.

Kameragröße
Kameragewicht

28×52×68 mm
168 g

Die TESSINA wird gewöhnlich in einem rot/blauen Etui geliefert. Ein Tageslicht-Filmspuler, der es erlaubt, wenn nötig ab überall erhältlicher Normkassette in die TESSINA-Spezialkassette umzuspulen, ist zumeist im Preise eingeschlossen.

Die Geschenkpackung

In der Geschenkpackung ist die TESSINA mit den gebräuchlichsten Zubehörartikeln umgeben, wie Kette mit Stativplatte, Lederband, Sportetui sowie 4 Filmen.
Ebenfalls liegt ein Umspuler ohne Etui dabei.

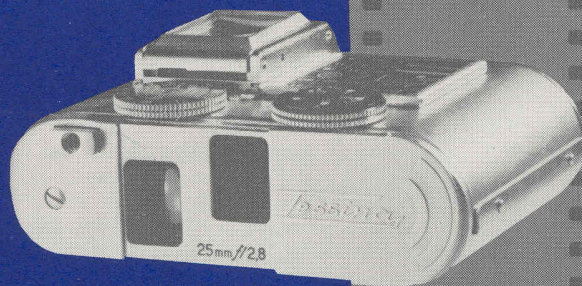
Beachten Sie bitte: Mit der TESSINA benötigen Sie keine Spezialeinrichtungen weder für die Vergrößerung noch für die Diaprojektion.

9.5 mm*

16 mm*

35 mm*

**NEGATIVE - LY
SPEAKING**



*Tessina 35 and films
shown in actual size

***Tessina* and . . . positively speaking
35 is the only subminiature that makes sense!**

**THE
EXPERTS
AGREE^{ABOUT}**

Tessina

WORLD'S SMALLEST 35

**POPULAR
PHOTO-
GRAPHY**

"Extremely well-conceived and engineered"

**modern
PHOTOGRAPHY**

"Picture taking . . . most enjoyable"

U.S. CAMERA

"A marvel of Swiss precision"

U.S. CAMERA

POCKET STUDIO

This compact outfit permits you to carry a camera and important flash accessories wherever you go.

I KNEW a photographer once who always had a camera with him. You could never catch him without the briefcase that held his camera, accessories and samples of his work. He made a comfortable living as a professional news and magazine photographer. For extra profit, he did portrait and commercial work. He admitted that the secret of his success was the fact that he always had his camera with him, and everybody knew that he did.

It is good to have a camera handy at all times. The man with the always-ready camera can capture interesting scenes and occurrences that escape the occasional photographer.

I myself attempted to carry a camera at all times, but circumstances compelled me

to give it up. Situations arose that prevented me from carrying my equipment-loaded gadget bag or briefcase.

When the ultra-miniature cameras appeared I bought one and kept it with me, day and night. The fly in the ointment was the poor quality of the enlarged pictures. Good as it was, for its size, my ultra-miniature was not suitable for standard professional work.

About six months ago I was introduced to the Tessina, a Swiss-made ultra-miniature precision camera that uses 35mm film. At first I thought that it would also have the shortcomings of my former ultra-miniature. Tests, however, proved that at last I found the ideal personal camera.

With the Tessina I was able

to get professional quality results in both black-and-white and color.

To be able to take pictures under most conditions, I acquired a few additional items which, with the Tessina, serve as a complete "Pocket Studio." I can carry the



THREE flash units, one on camera and two slaves, were used for girl's portrait. Equipment is easy to carry.

OUTFIT consists of Tessina, meter, flashgun, two Kodak slave units, tripod, camera clamps, flashbulbs.

modern PHOTOGRAPHY

TESSINA ULTRA MINI USES STANDARD 35MM

One of the major problems facing the ultra or subminiature user has been non-standard film. Whether 8, 9.5 or 16mm is needed, the photographer depends on the camera distributor for loaded cartridges or must go through a very elaborate and complicated cartridge reloading scheme using movie film. Processing of the very tiny and delicate color and black-and-white images is good, bad or indifferent depending on the lab. It's fairly expensive in any case.

The Tessina manufacturers, Concava S.A. of Switzerland, have cleverly obviated all this trouble. The tiny (2½ x 2 x 1 in.) light (5 oz.) Tessina uses standard 35mm film in special slim plastic cassettes similar in construction to standard 35mm cassettes. An extremely clever daylight bulk loader (\$6.95) allows the user to load his own film from any ordinary 20 or 36-exposure film cassette, black-and-white or color. The plastic Tessina cassettes hold 16½ in. of thin-based black-and-white film or 14½ in. of color or thick-based black-and-white. About 23 thin-film or 19 thick-film pictures, 14 x 21mm, can be made on one loading. If you figure some loss of film for front and rear leader, a standard 20-exposure 35mm cassette yields about 40 Tessina pictures, bigger than any other ultraminiature size yet slightly smaller than the standard single frame 18 x 24mm area.

Incidentally, you don't have to do any frame counting when using the loader. It measures either length of film automatically and has a built-in knife to cut the film, too. It takes about three minutes working time to load a single cassette.

The 35mm film when processed in any 35mm tank using standard 35mm developing procedures can be enlarged in any enlarger having a standard 35mm negative carrier.

So much for the system. Now to the camera. The Tessina is slightly larger than a matchbox, and you hold it like one. The viewing and taking lenses on one long edge are protected by a sliding metal shield. Unless the shield is slid open, you can't fire the camera. The shutter release button is on the front of the camera. At the back are the spring-wind film advance wheel, the rewind knob, click position shutter speed dial, MFX sync dial, and push-on flash contact, plus lift-up rewind lever. On top of the Tessina near the front are two wheels.

The right one focuses the camera, the left has non-click-stop aperture settings and a central, concentric, manual-re-setting exposure counter. Dials and numerals are for nimble fingers and good eyes. Behind the focusing dial is a 14 x 21mm ground glass with rails to

hold either the folding reflex and optical sportsfinder, condenser field lens or the new eye-level prism. At the left is an exposure guide plate. On the bottom of the camera is a removable plate with brief loading instructions. This can be replaced with a plate attached to a wrist-watch-like strap or metal plate with tripod socket and neck chain.

At this point you may begin to wonder how the lens can be at one long end of the matchbox shape Tessina and the film rolling along on the bottom. It's done with a front surface mirror set at 45 degrees between lens and film plane. Consequently all film shot by Tessina is reversed, as in a mirror. By reversing the film when printing or enlarging you get a right way 'round result.

You load the Tessina very much like any 35mm camera—the entire bottom (back in a standard 35mm camera) is removable. You then wind the film advance spring knob about four full turns, set the film counter at the red dot before zero and click off three frames to reach exposure 1. When all shots have been made, you flick up the rewind knob, rewind the film and take the film out.

When the smooth Tessina shutter release is pressed, an almost inaudible click of the shutter is followed by a whirring wind of the film advance clock work mechanism. It sounds much like the Robot camera film advance.

Rewinding is easy once you get the initially very stiff rewind lever in the "up" position. The lever becomes less aggressive after some use.

The optical sportsfinder is quite easy to use but the tiny 14 x 21mm focusing ground glass is not. It is film area size and there's no magnifier in the folding hood. A brilliant field lens (\$4.95) which replaces the hood is even more useless since it has no hood protection against extraneous light and no magnification either. We made a small cone-shaped magnifier out of a novelty key chain transparency viewer and licked the focusing problem—at least partially. By removing the viewer's plastic film end and standing it over the ground glass, we could focus the camera very easily and found picture taking most enjoyable—for vertical pictures. Since the camera must be held on edge for horizontal pictures, this proved quite a chore with our makeshift rig. However we were delighted recently to obtain the long-awaited pentaprism viewfinder (\$39.90).

We put the prism into one pocket, the camera in another. In seconds we could slip both out, attach them and have a most critical focusing eye level prism reflex. The view through the prism is adequately bright with a fairly coarse ground glass which provides amazing ease of focusing—and from a 25mm lens too. Pin-point focus portraiture by natural light from 9 in. to 3 ft. proved a snap.

Results from the overly large negative area were understandably far superior to what could be achieved in like circumstances with like film of any ultra or subminiature. Quality approached what could be expected from full sized single-frame cameras.

Once we got the location of the controls down, we found operation of the camera to be fairly easy. Good fingernails to lift out the spring wind and rewind knob are helpful. Incidentally if the whir of the film advance spring mechanism disturbs you or the subject, just shoot while holding the rewind knob tightly. After shooting, release the rewind knob slowly. The Tessina then becomes as quiet as a mouse.

While you can keep right on using the \$1.20 23-exposure rolls of KB-14 (ASA 20), KB-17 (ASA 40) or KB-21 (ASA 100) the advantages of reloading and shooting your own favorite film—Kodachrome, Agfachrome, Anscochrome, Plus-X, Panatomic-X, etc., while saving money to boot will undoubtedly prove over-powering. With moderate care we were able to load our own easily. With thick-based films such as Tri-X Pan it's advisable to load and let the film "set" in the cartridge for a few days. The extreme curl of the film in the small cartridges will limit the number of shots on each spring winding if the film doesn't have time to adapt itself. Even Tri-X Pan pulled through with no trouble if loaded at least 36 hours prior to use.

If you buy the already loaded Adox cassette to begin with and ask your processor to return the empties to you, you'll have a supply of cartridges to load yourself. If not, extra cassettes are 95¢ each.

While you can send your Ansco or Kodak color film to almost any independent lab for processing (not to Kodak or Ansco, however), the film will not be returned mounted at present. One lab, Berkey Photo, 77 East 13th St., New York 3, does offer full Tessina color processing facilities plus mounting in Tessina cardboard mounts. However, you can mount your own in special glass binders. A box of 25 cost \$3.95. We tried Kodachrome with Berkey processing and mounting. Results were good although the outlines of the Tessina mounts seemed to have a slightly rough edge. The importer says however that Berkey will soon have new, cleaner-cut mounts. The transparencies projected nicely on a 30 x 40-in. lenticular surface screen. In black and white, Kodak Plus-X Pan gave us good quality to 8 x 10 and Kodak Panatomic-X allowed enlargements to 11 x 14 with results we would accept from larger negatives.

And we simply never could get over those large negatives coming out of that tiny, shiny metal box.—H.K.

25mm f/2.8 Tessinon

Aperture	Center Sharpness	Edge Sharpness
2.8	Very good	Acceptable
4	Very good	Acceptable
5.6	Very good	Good
8	Good	Good
11	Good	Good
16	Good	Good
22	Acceptable	Good

TESSINA—a unique SUB-35

Did you ever hold a camera in the palm of your hand which when clicked had a sound like a mouse's startled squeak? Or one so compact that members of our nation's security forces can hide it in hollowed cigarette packs for undercover work? Shooting with the Tessina, it becomes immediately apparent we are handling an extremely well-conceived and engineered camera.

Its high standard of precision is understandable when you realize that a watch manufacturing firm in Lugano, Switzerland is responsible for its construction. The Swiss watchmaker's discipline which is put into timepieces also becomes evident in the Tessina.

We found the Tessina to be essentially a twin-lens reflex, making pictures with a format of 14x21-mm on standard 35-mm film. The photographed image is reflected to the film plane by a front-surface mirror set at 45 degrees. This reflects the light rays downward, onto the film, which runs horizontally inside the base of the camera. Thus a vertical picture is formed across the film, but the negative is laterally reversed, i.e., left is right. In order to obtain a laterally correct print it is necessary to invert the negative in the enlarger—emulsion toward the light source. Likewise, color slides should be viewed through the emulsion side. Tests and examinations of both prints and negatives produced by this optical system showed no apparent deterioration of image quality from the mirror.

In shutter speeds the Tessina offers $\frac{1}{2}$ to 1/500 second, plus B. It has M, F, and X synch. The lens can be stopped down to f/22, which with the 25-mm f/2.8 Tessinon's short focal length gives amazing depth of field. The 25-mm focal length on the 14x21-mm format is roughly equivalent to a 43-mm lens on full-frame 35-mm. Thus it has slightly wide-angle coverage.

A spring-wound motor, which we found impossible to overwind, automatically cocks the shutter and moves the film forward. This allows you to get off from five to eight shots before rewinding. Film for the Tessina comes in special cassettes of 23 exposures for black-and-white on a 16 $\frac{1}{2}$ -inch strip of film and 18 exposures for color on a 14 $\frac{1}{2}$ -inch strip. In factory-preloaded cassettes of this type for the Tessina there are Adox KB14, KB17, and KB21, with exposure indexes of 20, 40, and 100 respectively. Soon color film of the same ratings will be available. For photographers who wish to use other types of

film there is an ingeniously designed daylight self-loader. This accepts a standard 35-mm cartridge and allows you to spool film from it into an empty Tessina cassette in daylight. A lever with an attached razor-edged protuberance quickly cuts and squares off the necessary footage once it has been cranked off.

Enlarging the negative is done just as with other 35-mm work, except it must be remembered that the negative is placed in the enlarger with the emulsion (dull side) side toward the light. Again, since you are dealing with a negative of only 14x21-mm, dust or a careless scratch becomes a more critical problem.

In mounting the color slides special cardboard slide-binding frames which fit ordinary projectors are available from the distributor. They come in boxes of 100, measure 2x2, and sell for \$3.95. Metal and glass binders are 25 for \$3.95.

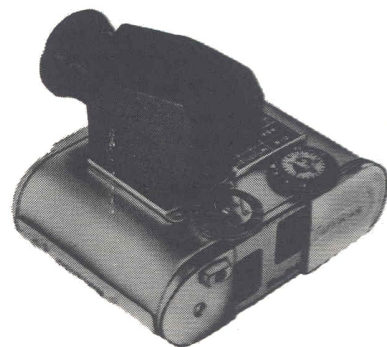
We found the newest accessory viewer—the pentaprism—most practical. Working under available-light situations, or for critical focusing, the pentaprism neatly fitted the bill. It gave a large image which is upright and laterally unreversed at all times.

For quick panning with a subject, and sequence shooting, we found the sports-finder best. For fast shooting we set the distance at ten feet and stopped down to f/5.6. Varying only the shutter speeds, according to our ASA rating and light conditions, we were able to get sharp images from infinity to seven feet.

Because of the small separation between the taking and viewing lenses, parallax in the Tessina is so small that it can generally be ignored. However, at the closer working distances, 11.8 inches and closer, ignore about 15 mm at the right and 10 mm at the left of the subject.

The Tessina handles very well. There need never be fear that the camera is too delicate for continual shooting. Even the most ham-fisted individual will have no trouble focusing and releasing the shutter. Lens hoods are not ordinarily necessary, as both taking and viewing lens are recessed. Accidental firing is prevented by a sliding cover plate which automatically locks the shutter until it is slid aside to uncover the lenses.

For a camera that can use any available 35-mm film, focuses down to nine inches, has a groundglass viewing screen, fantastic depth of field, weighs in at five ounces, and measures only 2 $\frac{1}{2}$ x2x1 inches, the Tessina has few competitors.



TECH DATA

FILM LOAD: Special 35-mm cassettes. Film may be spooled into empty Tessina cassettes from cartridges.

CAMERA TYPE: 35-mm motorized twin-lens reflex; sub 35-mm.

LENS: Viewing lens/taking lens: two Tessinon 25-mm f/2.8's with built-in haze filters, stopping down to f/22. Focusing: infinity to 9 inches.

SHUTTER: Rotary type. Linear speed range from $\frac{1}{2}$ to 1/500 second, plus B; M, F and X synch.

VIEWING-FOCUSING: Twin-lens reflex system with groundglass viewer. Removable self-erecting eye-level and waist-level sports-finder. Pentaprism finder (6X), waist-level magnifier (8X), and snap-on field lens available as accessories.

AUTOMATION: Built-in spring-wind motor automatically cocks the shutter and exposure counter, transports the film and re-cocks the shutter. One winding gives five to eight shots.

OTHER FEATURES: Sliding lens guard prevents accidental exposure. Cable release socket. Film counter dial. Dimensions: 2 $\frac{1}{2}$ x2x1 inches. Weight: 5 ounces. Accessory shoe takes Metraphot or other small exposure meter.

BIGGER Than **LIFE ENLARGEMENTS**



U.S. CAMERA

THE SWISS-MADE Tessina is a true ultra-miniature camera. It is tiny ($2\frac{1}{2}'' \times 2'' \times 1''$) and light (5 oz.). Its features, however, make it outstanding and unique in that class. The Tessina is the only ultra-miniature that uses standard 35mm film, available anywhere in a variety of black-&-white and color emulsion types. From the standard cassettes the film is reloaded (in daylight) into special Tessina cartridges. The cleverly designed daylight loader is small, light and troublefree.

The Tessina cartridge holds film for 18 color or 21 black-&-white exposures. Since four Tessina cartridges can be loaded from one 36-exposure roll or film, the user gets about twice as many negatives or transparencies from each roll.

The image size is a surprisingly large $14 \times 21\text{mm}$, which is only a fraction smaller than the regular $18 \times 24\text{mm}$ half-frame 35mm image.

At first glance it might seem hard to believe that such a tiny camera could use regular 35mm film, or that it could produce such a large image. The secret is in the use of a front-surface mirror that directs the light emerging from the lens toward the film positioned along the bottom of the camera. That way the path of light is made long enough to accommodate a lens of 25mm focal length. The largest opening of the Tessina lens is $f/2.8$ and it can be stopped down to $f/22$.

At this point a question might occur to you, as it did to me: "Will the interposition of a mirror interfere with the sharpness of the image?" It will not! Image sharpness is bordering on the fantastic. The tiny negative can be blown up to a sharp, grainless $20 \times 24''$ print. I make needle-sharp $8 \times 10''$ and $11 \times 14''$ prints from Tessina negatives as a matter of routine. Panatomic-X film developed in Microdol-X produces extremely fine grain



ACTUAL SIZE of the versatile Tessina ultra-miniature 35mm camera is illustrated above with the accessory pentaprism affixed in place for shooting.

negatives, as long as the film is *not* overexposed or overdeveloped. I projected Kodachrome-X transparencies made with the Tessina to fill a 60" screen and the projected image was sharp.

In short, the Tessina can be used to make negatives and transparencies that are, for all practical purposes, equal to work done with full size 35mm cameras.

Since a mirror is used between the lens and the film, the image is reversed from left to right. This is corrected during printing by placing the negatives in the enlarger with the emulsion side away from the paper, not facing it, as usually done. Color

transparencies are corrected by reversing them in the viewer or slide projector.

The Tessina is a twin-lens reflex camera. One lens takes the picture, while a second, matched lens produces an identical ground-glass image for viewing and focusing. However, the viewing lens is so close to the taking lens that, for all practical purposes, the camera can be used as a single-lens reflex camera. Automatic parallax correction is provided to assure accurate framing for closeups. The lens can be focused and the image accurately framed from infinity to nine inches.

(Continued U.S. CAMERA)

PORTION of Tessina negative enlarged approximately 20X shows fine quality possible both in sharpness and grain.



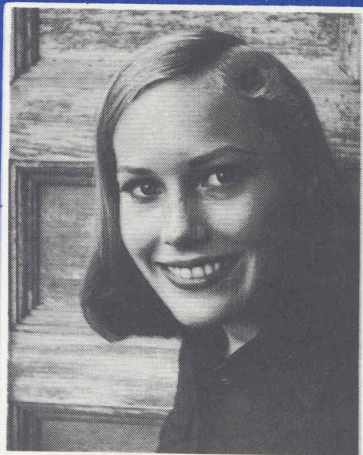
POCKET STUDIO

equipment in my pockets without making a bulge. The pocket studio consists of the following items:

- Tessina with pentaprism finder
- Metraphot exposure meter
- Emo B-C flashgun with retractable reflector
- Minox pocket tripod
- small camera clamp
- two Kodak electric eye remote flash units
- General Electric AG-1 flashbulbs

This outfit enables me to take pictures under a great variety of circumstances.

I consider my Tessina Pocket Stu-

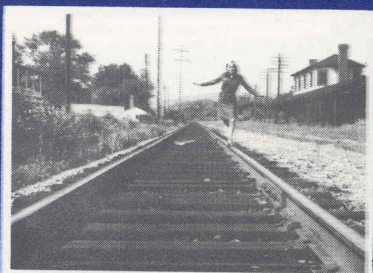


dio to be a hobby within a profession, a hobby that enables me to take pictures of things I like, not only of those I get paid for. Of course, I can take pictures I like with my "regular" equipment, and often do, but having the tiny Tessina with me always results in additional fun and in many interesting pictures that I would have missed without it. Last but not least, having the camera handy sometimes results in additional unexpected income.

The illustrations will give you an idea of the photographic quality that can be achieved with the Tessina and the accessories carried in the pocket studio outfit.

The girl's portrait is a flash shot. One flash on camera, one Kodak slave unit on the right and the second slave unit behind the subject, to serve as a background light. Since all flash reflectors are shallow and nondirectional, the lighting is pleasingly soft.

The striking perspective of the girl on tracks results from a low camera position, combined with the great



depth of field of the Tessina lens. With the 25mm lens stopped down to f/22, the depth of sharp field reaches from 21 inches to infinity.

There is no end to what you can do with a pocket studio outfit. Assemble your outfit to suit your requirements. You will find that carrying a camera at all times is a lot of fun and occasionally it can also be quite profitable.

—Joseph Foldes

U.S. CAMERA

The lenses are recessed in the camera body, eliminating the need for a lens shade. A metal cover protects the lenses when the camera is not in use. The shutter release operates only when this metal cover is fully withdrawn.

The jeweled-shutter and film-transport mechanism of the Tessina is a marvel of Swiss precision. The camera has a spring motor that winds the shutter and forwards the film. Five-to-eight exposures can be made without rewinding—in rapid sequence if desired. The shutter speeds range from 1/2 to 1/500. There is also a B setting. The shutter is fully synchronized, with M, F and X settings.

Three types of viewers are available: a pentaprism, a magnifying hood and a sports finder. The sports finder is supplied with the camera, the other two are sold as accessories. I like the pentaprism finder best. It provides six-times magnification and a clear, easy-to-focus and frame image. With the pentaprism finder both vertical and horizontal pictures are possible.

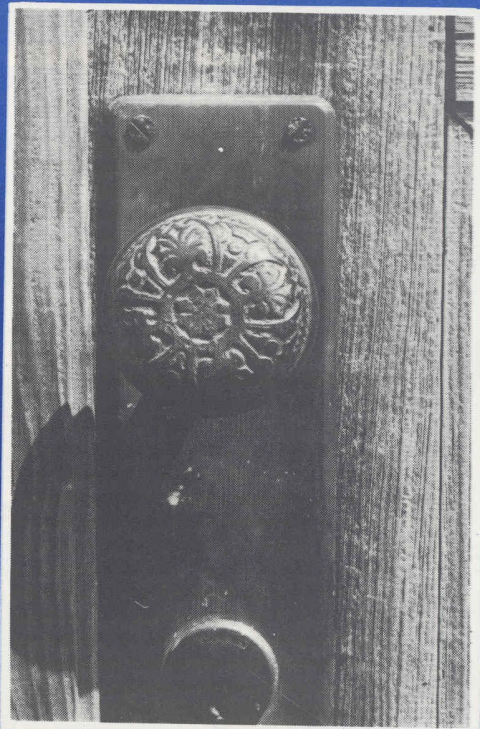
The magnifying hood magnifies the ground-glass image eight times. It is practical for vertical compositions only. The pentaprism and the magnifying hood finders can be focused to match the eyesight of the photographer.

Since it uses 35mm film, Tessina negatives can be developed in standard 35mm tanks. The 2x2" Tessina slide binders fit all standard slide projectors.

The camera is equipped with an accessory shoe to accommodate the tiny Metraphot exposure meter or a miniature flashgun. With the use of an accessory wrist strap the Tessina can be worn like a wrist watch. A neck chain with a tripod plate and a variety of leather cases are available.

The Tessina comes in a standard satin chrome finish (\$149.50), or in red, gold or black finish (\$159.50). The list price of the pentaprism finder is \$39.90. The U.S. distributor of the Tessina is Karl Heitz, Inc., 979 Third Ave., New York 10022, N. Y.

To summarize: the Tessina is in a class by itself. It is an ultra-miniature in size, weight and appearance. It is the world's smallest 35mm camera. The precision and the reliability of the mechanism is matched only in fine Swiss watches (in fact, the Tessina is made by watchmakers). Image quality is superb, it meets professional standards.—Joseph Foldes



PHOTOFINISHERS WHO PROCESS, MOUNT, AND ENLARGE 35mm FILM TAKEN WITH THE TESSINA CAMERA:

Berkey Photo, TESSINA Dept., 77 E. 13th St., New York 3, N.Y.
 Berkey Photo, TESSINA Dept., 12 Henley St., Boston 29, Mass.
 Custom Proc., TESSINA Dept., 3105 E. Xyler, Box 1241, Tulsa, Okla.
 Vazis Camera, TESSINA Dept., 7167 Manchester, Maplewood, Mo. 63143
 Modernage, TESSINA Dept., 6 West 48th St., New York, 36 N.Y. (B & W Only)
 N.W. Custom, TESSINA Dept., Univ. Sta., Box 16, Seattle 5, Wash.
 Perfect Photo, TESSINA Dept., 2717 N. Lehaann Ct., Chicago, Ill. 60606
 Perfect Photo, TESSINA Dept., 1810 W. Pico, Los Angeles, Cal. 90006
 Perfect Photo, TESSINA Dept., 4747 N. Broad St., Phila., Pa. 19141
 Western Submini. Lab., TESSINA Dept., Box 48404, Los Ang. 48, Cal.
 KODAK, ANSCO, AGFA process, but do not mount TESSINA 35mm film

Tessina WORLD'S SMALLEST 35mm CAMERA

A Technical Miracle of Swiss Chronometer Precision, carried as conveniently as a wallet, watch, lipstick or pack of cigarettes — always ready to shoot, anytime, anywhere.

SMALL SIZE: Lightweight (5½ ounces), compact (2½x2x1"), smaller than a pack of cigarettes, and any 16mm camera, but...

LARGE IMAGE: 14x21mm picture is 2 to 3 times larger than that of other subminiature cameras.

CHOICE OF 35mm FILM: Takes any standard 35mm color or black and white film, but...

MORE ECONOMICAL: Same film length renders 2½ to 3 times as many pictures as standard 35mm camera.

EVERREADY: Pressing the button automatically takes the picture, counts the exposure, transports the film and cocks the shutter for the next shot.

AUTOMATIC: Swiss precision miniature motor provides 5-8 pictures without rewinding, ideal for rapid action photography.

TWIN-LENS REFLEX: 2 reflex systems with parallax-corrected lenses.

FAST AND SHARP: Haze-filtered TESSINON 25mm f/2.8 renders color corrected picture of critical sharpness and contrast, suitable for large-size projection and enlargements. Angle of view 53°.

GROUNDGLASS IMAGE: Through-the-lens viewing for accurate framing, focusing and depth-of-field control.

CHOICE OF DISTANCES: Continuous focusing from infinity down to 9" for close-ups, but TESSINA may also be PRESET for universal distance range.

CHOICE OF LENS STOPS: From f/2.8 to f/22.

CHOICE OF SPEEDS: Swiss precision movement with speeds from ½-1/500 seconds and B.

CHOICE OF SYNCHRONIZATION: M for attachable Tessina flashgun or X and F

CHOICE OF FINDERS: Reflex and Sports-finders permits waist level, eye level and 90° angle shots, can be replaced by field lens, 8X magnifier or 6X prism-finder.

JEWELLED MECHANISM: Ruby stones as used in fine Swiss watches eliminate friction and wear, guarantee smooth operation.

CANDID SHOTS: In your hand or pocket, on its wrist-strap or neckchain, the TESSINA is ideally suited for taking unsuspected pictures.

17 JEWEL WATCH: Attaches easily to accessory clip of Tessina.

CHOICE OF ENLARGER: Up to 20x24" and beyond, with standard 35mm enlargers.

CHOICE OF PROJECTOR: 2x2 glass or cardboard binders for any 35mm projector.

PROTECTION: Shockproof construction withstands the most rugged use.

EASY FIT: Can be conveniently carried all year, in coat, hip or shirt pocket, in a lady's purse, etc.

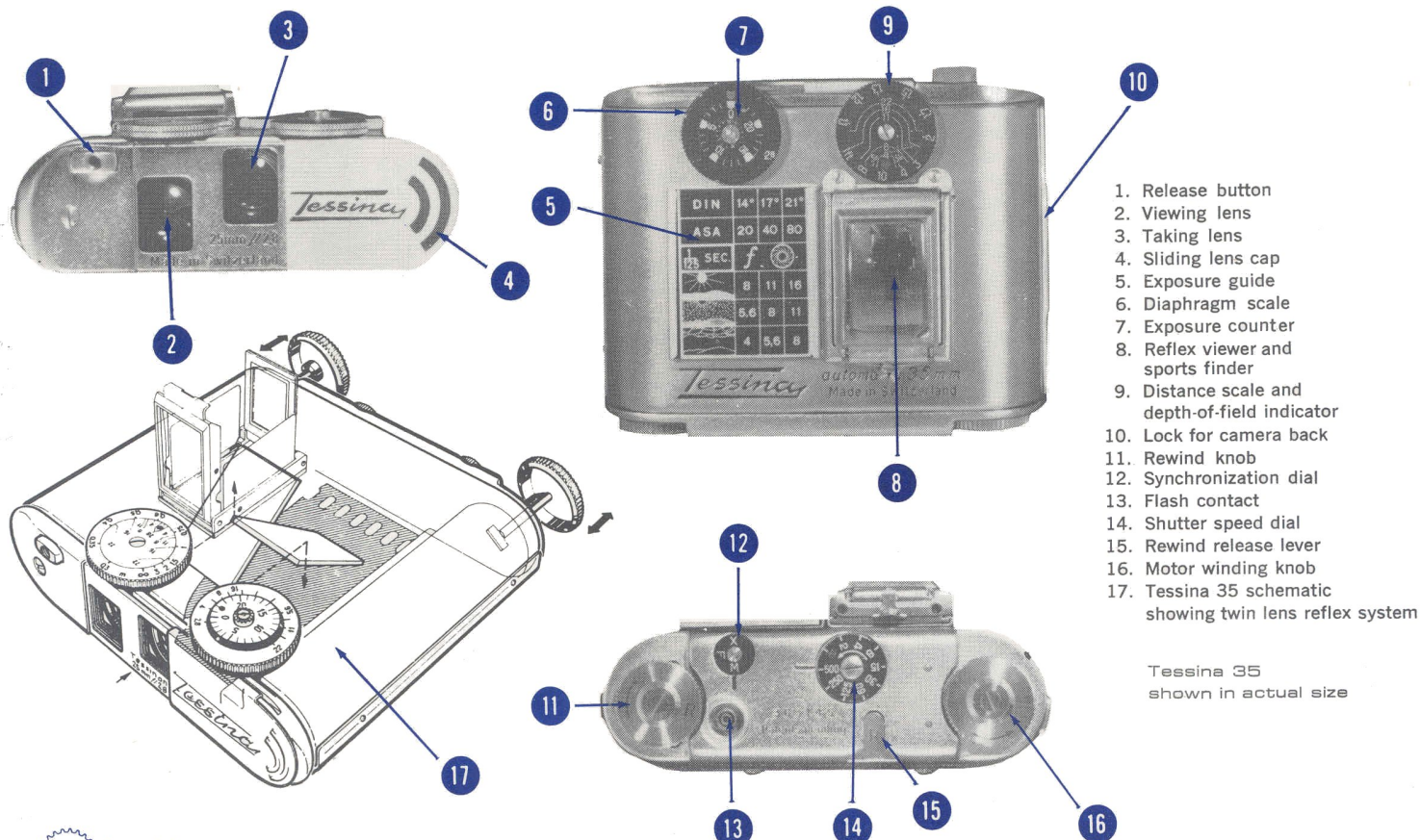
EASY PROCESSING: Any finisher who processes 35mm film—any 35 mm tank.

EASY TO USE: Detachable plates on camera with brief instructions for use and exposure guide.

CHOICE OF COLORS: The TESSINA is available in chrome, black, red or gold finish.

SWISS CHRONOMETER PRECISION: Custom-built with meticulous precision like a fine watch, as only the famous watchmakers of Switzerland can do it.

SWISS QUALITY CONTROLS: Meeting the most rigid quality standards, every TESSINA is scrupulously quality controlled, carries a world wide guarantee.



Tessina 35 shown in actual size



979 THIRD AVENUE, NEW YORK, N. Y. 10022 • (212) HA 1-5220

T 10MC 1265

ALPA • TESSINA • ROBOT • CARENA • KINOPTIK • PRIMOS • VOLOMAT • LINDIA • KERN • OMAG • MAYACORD • FI-CORD • ASTROLUX

TESSINA—a unique SUB-35

Did you ever hold a camera in the palm of your hand which when clicked had a sound like a mouse's startled squeak? Or one so compact that members of our nation's security forces can hide it in hollowed cigarette packs for undercover work? Shooting with the Tessina, it becomes immediately apparent we are handling an extremely well-conceived and engineered camera.

Its high standard of precision is understandable when you realize that a watch manufacturing firm in Lugano, Switzerland is responsible for its construction. The Swiss watchmaker's discipline which is put into timepieces also becomes evident in the Tessina.

We found the Tessina to be essentially a twin-lens reflex, making pictures with a format of 14x21-mm on standard 35-mm film. The photographed image is reflected to the film plane by a front-surface mirror set at 45 degrees. This reflects the light rays downward, onto the film, which runs horizontally inside the base of the camera. Thus a vertical picture is formed across the film, but the negative is laterally reversed, i.e., left is right. In order to obtain a laterally correct print it is necessary to invert the negative in the enlarger—emulsion toward the light source. Likewise, color slides should be viewed through the emulsion side. Tests and examinations of both prints and negatives produced by this optical system showed no apparent deterioration of image quality from the mirror.

In shutter speeds the Tessina offers $\frac{1}{2}$ to 1/500 second, plus B. It has M, F, and X synch. The lens can be stopped down to f/22, which with the 25-mm f/2.8 Tessinon's short focal length gives amazing depth of field. The 25-mm focal length on the 14x21-mm format is roughly equivalent to a 43-mm lens on full-frame 35-mm. Thus it has slightly wide-angle coverage.

A spring-wound motor, which we found impossible to overwind, automatically cocks the shutter and moves the film forward. This allows you to get off from five to eight shots before rewinding. Film for the Tessina comes in special cassettes of 23 exposures for black-and-white on a 16½-inch strip of film and 18 exposures for color on a 14½-inch strip. In factory-preloaded cassettes of this type for the Tessina there are Adox KB14, KB17, and KB21, with exposure indexes of 20, 40, and 100 respectively. Soon color film of the same ratings will be available. For photographers who wish to use other types of

film there is an ingeniously designed daylight self-loader. This accepts a standard 35-mm cartridge and allows you to spool film from it into an empty Tessina cassette in daylight. A lever with an attached razor-edged protuberance quickly cuts and squares off the necessary footage once it has been cranked off.

Enlarging the negative is done just as with other 35-mm work, except it must be remembered that the negative is placed in the enlarger with the emulsion (dull side) side toward the light. Again, since you are dealing with a negative of only 14x21-mm, dust or a careless scratch becomes a more critical problem.

In mounting the color slides special cardboard slide-binding frames which fit ordinary projectors are available from the distributor. They come in boxes of 100, measure 2x2, and sell for \$3.95. Metal and glass binders are 25 for \$3.95.

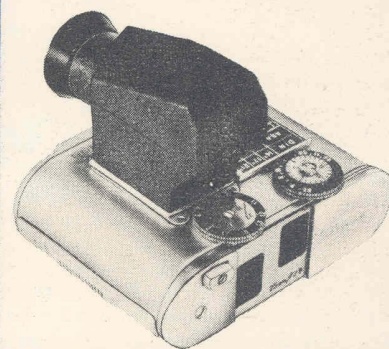
We found the newest accessory viewer—the pentaprism—most practical. Working under available-light situations, or for critical focusing, the pentaprism neatly fitted the bill. It gave a large image which is upright and laterally unreversed at all times.

For quick panning with a subject, and sequence shooting, we found the sports-finder best. For fast shooting we set the distance at ten feet and stopped down to f/5.6. Varying only the shutter speeds, according to our ASA rating and light conditions, we were able to get sharp images from infinity to seven feet.

Because of the small separation between the taking and viewing lenses, parallax in the Tessina is so small that it can generally be ignored. However, at the closer working distances, 11.8 inches and closer, ignore about 15 mm at the right and 10 mm at the left of the subject.

The Tessina handles very well. There need never be fear that the camera is too delicate for continual shooting. Even the most ham-fisted individual will have no trouble focusing and releasing the shutter. Lens hoods are not ordinarily necessary, as both taking and viewing lenses are recessed. Accidental firing is prevented by a sliding cover plate which automatically locks the shutter until it is slid aside to uncover the lenses.

For a camera that can use any available 35-mm film, focuses down to nine inches, has a groundglass viewing screen, fantastic depth of field, weighs in at five ounces, and measures only 2½x2x1 inches, the Tessina has few competitors.



TECH DATA

FILM LOAD: Special 35-mm cassettes. Film may be spooled into empty Tessina cassettes from cartridges.

CAMERA TYPE: 35-mm motorized twin-lens reflex; sub 35-mm.

LENS: Viewing lens/taking lens: two Tessinon 25-mm f/2.8's with built-in haze filters, stopping down to f/22. Focusing: infinity to 9 inches.

SHUTTER: Rotary type. Linear speed range from $\frac{1}{2}$ to 1/500 second, plus B; M, F and X synch.

VIEWING-FOCUSING: Twin-lens reflex system with groundglass viewer. Removable self-erecting eye-level and waist-level sports-finder. Pentaprism finder (6X), waist-level magnifier (8X), and snap-on field lens available as accessories.

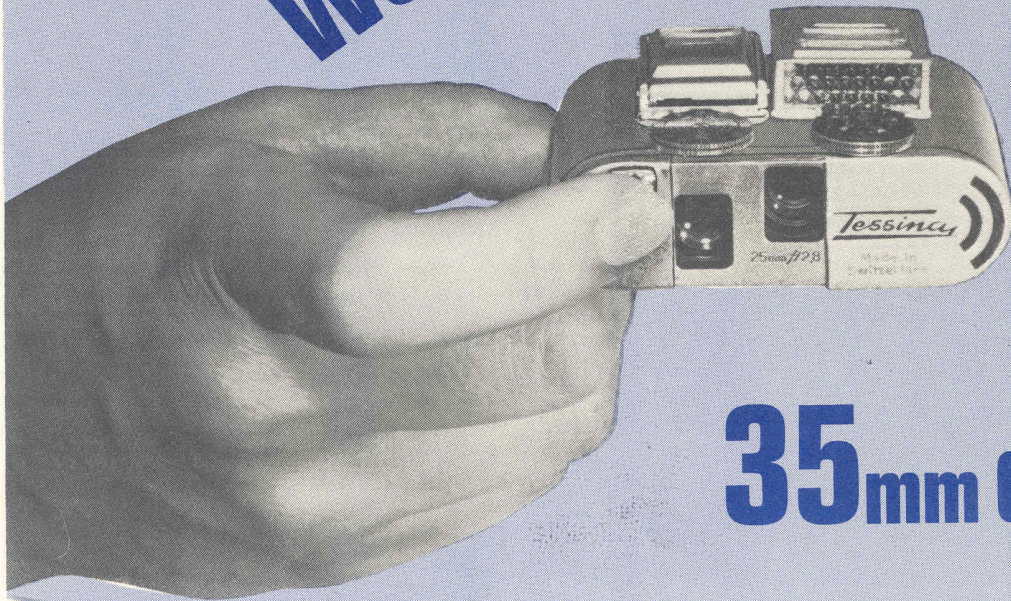
AUTOMATION: Built-in spring-wind motor automatically cocks the shutter and exposure counter, transports the film and re-cocks the shutter. One winding gives five to eight shots.

OTHER FEATURES: Sliding lens guard prevents accidental exposure. Cable release socket. Film counter dial. Dimensions: 2½x2x1 inches. Weight: 5 ounces. Accessory shoe takes Metraphot or other small exposure meter.

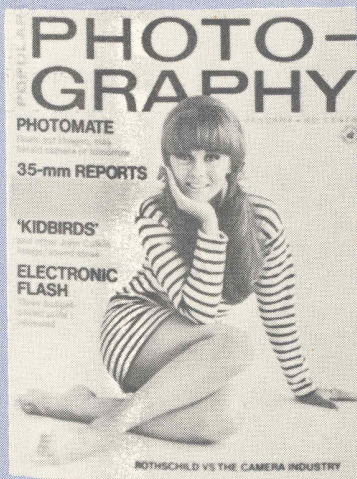
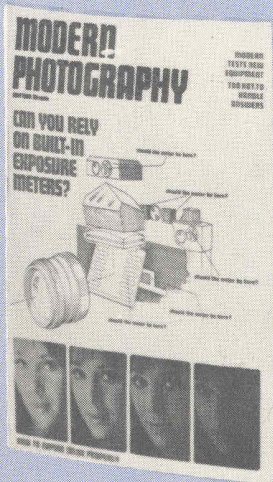
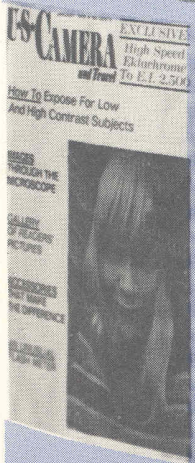
MAY 19, 1969

Tessina[®] 35L

WORLD'S SMALLEST



35mm CAMERA



TEST REPORTS

BY LEADING PHOTOGRAPHIC MAGAZINES

MODERN PHOTOGRAPHY

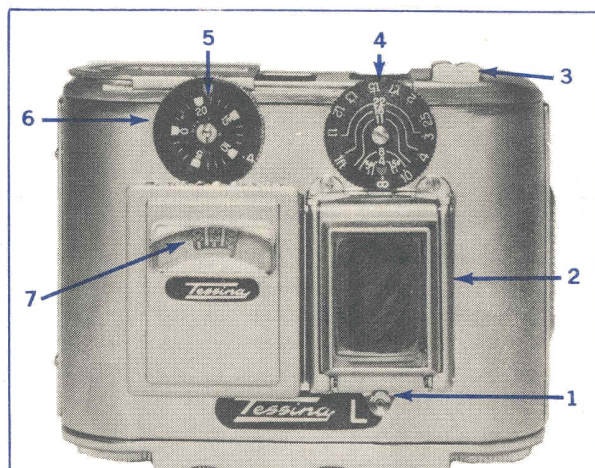
Tessina 35L

equipment in my pockets without making a bulge. The pocket studio consists of the following items:

- Tessina with pentaprism finder
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- Emo B-C flashgun with retractable reflector
- Minox pocket tripod
- small camera clamp
- two Kodak electric eye remote flash units
- General Electric AG-1 flashbulbs

This outfit enables me to take pictures under a great variety of circumstances.

I consider my Tessina Pocket Stu-



1. Viewfinder hood release catch. 2. Viewfinder hood. 3. Shutter release button. 4. Focusing wheel/footage scale. 5. Frame counter. 6. Aperture selector wheel. 7. Meter.

dio to be a hobby within a profession, a hobby that enables me to take pictures of things I like, not only of those I get paid for. Of course, I can take pictures I like with my "regular" equipment, and often do, but having the tiny Tessina with me always results in additional fun and in many interesting pictures that I would have missed without it. Last but not least, having the camera handy sometimes results in additional unexpected income.

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The girl's portrait is a flash shot. One flash on camera, one Kodak slave unit on the right and the second slave unit behind the subject, to serve as a background light. Since all flash reflectors are shallow and nondirectional, the lighting is pleasingly soft.

The striking perspective of the girl on tracks results from a low camera position, combined with the great depth of field of the Tessina lens. With the 25mm lens stopped down to $f/22$, the depth of sharp field reaches from 21 inches to infinity.

There is no end to what you can do with a pocket studio outfit. Assemble your outfit to suit your requirements. You will find that carrying a camera at all times is a lot of fun and occasionally it can also be quite profitable.

—Joseph Foldes

Most ultraminiature cameras use ultraminiature film and give you an ultraminiature picture. The Tessina gives you an ultraminiature negative too (14 x 21mm, slightly more than half the 35mm format) but from a grown-up (35mm) film and does it with the same equipment the big boys use. On this box, less than half the size and weight of most 35's, you'll find two lenses (for focusing and viewing a la twin-lens reflex), a full range of adjustable f /numbers and shutter speeds, a cable release socket, a film advance-shutter cock motor, flash sync and the usual film rewind items. Then there's a flock of accessories you can add. This model 35L, the latest Tessina, comes with a coupled selenium meter as standard equipment.

It's interesting to note that this product of Switzerland also offers a wrist strap as an accessory so that it can be worn like a watch. And upon handling the camera, certain similarities between it and a watch are apparent. All dials are knurled, close to the body and wind and turn with precision and authority; the clickstopped shutter speed (11), sync (14) and frame counter (5) dials click in decisively; and the combination focusing hood-sports-finder (2, 15) and meter (16) slip into the accessory shoes on the camera top tightly but smoothly.

A further accessory—a daylight film loader—lets you roll your own film from a standard 35mm cassette into the Tessina cassette, but we prefer the factory-loaded Tessina variety. Loading

the film in the camera is standard, but on a smaller scale, of course. The only drawback here (a minor one) is that the Tessina's back is detachable. The sliding lens cover (17) must be open for the film to advance, and if it's not actually all the way open the camera won't work. This could be a nuisance, but we found it gave us an unexpectedly secure feeling. (Those tiny lenses were being protected.)

Before slipping the meter (16) in place you set the film speed (from ASA 12-800) on the underside, then set the aperture wheel (6) to $f/4$ so the coupling gears will mesh properly and slide the meter in place. Here you have to be a little careful not to move the meter wheel off its ASA setting. Now you can operate the Tessina in the usual match pointer control ways.

The manufacturer claims you get from five to eight shots on one winding of the motor, but, in some cases, we squeezed out a few more. The big problem with the Tessina is focusing. The manufacturer recommends setting the footage scale (4) to 10 ft. and using a small aperture ($f/5.6$) to take advantage of the extended depth of field of the 25mm focal length. We found we could get critical focusing by removing the hood (2) and putting a small magnifier over the finder screen. As with any TLR, the image on that screen is reversed left to right. So is the final picture. That means you must project your slides and put the negatives in the enlarger backward.

BIGGER ^{Than} LIFE ENLARGEMENTS



WITH A CAMERA THAT SMALL.

U.S. CAMERA

POCKET STUDIO

This compact outfit permits you to carry a camera and important flash accessories wherever you go.

I KNEW a photographer once who always had a camera with him. You could never catch him without the briefcase that held his camera, accessories and samples of his work. He made a comfortable living as a professional news and magazine photographer. For extra profit, he did portrait and commercial work. He admitted that the secret of his success was the fact that he always had his camera with him, and everybody knew that he did.

It is good to have a camera handy at all times. The man with the always-ready camera can capture interesting scenes and occurrences that escape the occasional photographer.

I myself attempted to carry a camera at all times, but circumstances compelled me

to give it up. Situations arose that prevented me from carrying my equipment-loaded gadget bag or briefcase.

When the ultra-miniature cameras appeared I bought one and kept it with me, day and night. The fly in the ointment was the poor quality of the enlarged pictures. Good as it was, for its size, my ultra-miniature was not suitable for standard professional work.

About six months ago I was introduced to the Tessina, a Swiss-made ultra-miniature precision camera that uses 35mm film. At first I thought that it would also have the shortcomings of my former ultra-miniature. Tests, however, proved that at last I found the ideal personal camera.

With the Tessina I was able

to get professional quality results in both black-and-white and color.

To be able to take pictures under most conditions, I acquired a few additional items which, with the Tessina, serve as a complete "Pocket Studio." I can carry the



THREE flash units, one on camera and two slaves, were used for girl's portrait. Equipment is easy to carry.

OUTFIT consists of Tessina, meter, flashgun, two Kodak slave units, tripod, camera clamps, flashbulbs.

modern PHOTOGRAPHY

TESSINA ULTRA MINI USES STANDARD 35MM

One of the major problems facing the ultra or subminiature user has been non-standard film. Whether 8, 9.5 or 16mm is needed, the photographer depends on the camera distributor for loaded cartridges or must go through a very elaborate and complicated cartridge reloading scheme using movie film. Processing of the very tiny and delicate color and black-and-white images is good, bad or indifferent depending on the lab. It's fairly expensive in any case.

The Tessina manufacturers, Concava S.A. of Switzerland, have cleverly obviated all this trouble. The tiny (2½ x 2 x 1 in.) light (5 oz.) Tessina uses standard 35mm film in special slim plastic cassettes similar in construction to standard 35mm cassettes. An extremely clever daylight bulk loader (\$6.95) allows the user to load his own film from any ordinary 20 or 36-exposure film cassette, black-and-white or color. The plastic Tessina cassettes hold 16½ in. of thin-based black-and-white film or 14½ in. of color or thick-based black-and-white. About 23 thin-film or 19 thick-film pictures, 14 x 21mm, can be made on one loading. If you figure some loss of film for front and rear leader, a standard 20-exposure 35mm cassette yields about 40 Tessina pictures, bigger than any other ultraminiature size yet slightly smaller than the standard single frame 18 x 24mm area.

Incidentally, you don't have to do any frame counting when using the loader. It measures either length of film automatically and has a built-in knife to cut the film, too. It takes about three minutes working time to load a single cassette.

The 35mm film when processed in any 35mm tank using standard 35mm developing procedures can be enlarged in any enlarger having a standard 35mm negative carrier.

So much for the system. Now to the camera. The Tessina is slightly larger than a matchbox, and you hold it like one. The viewing and taking lenses on one long edge are protected by a sliding metal shield. Unless the shield is slid open, you can't fire the camera. The shutter release button is on the front of the camera. At the back are the spring-wind film advance wheel, the rewind knob, click position shutter speed dial, MFX sync dial, and push-on flash contact, plus lift-up rewind lever. On top of the Tessina near the front are two wheels.

The right one focuses the camera, the left has non-click-stop aperture settings and a central, concentric, manual-resetting exposure counter. Dials and numerals are for nimble fingers and good eyes. Behind the focusing dial is a 14 x 21mm ground glass with rails to

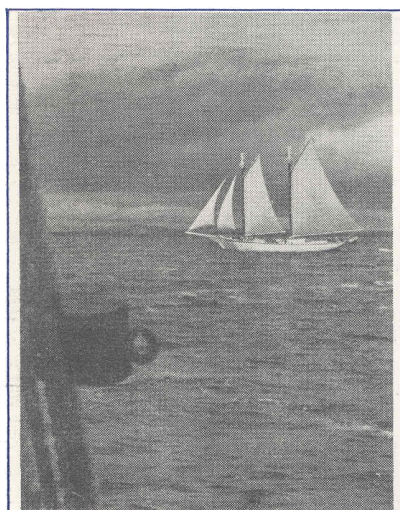
hold either the folding reflex and optical sportsfinder, condenser field lens or the new eye-level prism. At the left is an exposure guide plate. On the bottom of the camera is a removable plate with brief loading instructions. This can be replaced with a plate attached to a wrist-watch-like strap or metal plate with tripod socket and neck chain.

At this point you may begin to wonder how the lens can be at one long end of the matchbox shape Tessina and the film rolling along on the bottom. It's done with a front surface mirror set at 45 degrees between lens and film plane. Consequently all film shot by Tessina is reversed, as in a mirror. By reversing the film when printing or enlarging you get a right way 'round result.

You load the Tessina very much like any 35mm camera—the entire bottom (back in a standard 35mm camera) is removable. You then wind the film advance spring knob about four full turns, set the film counter at the red dot before zero and click off three frames to reach exposure 1. When all shots have been made, you flick up the rewind knob, rewind the film and take the film out.

When the smooth Tessina shutter release is pressed, an almost inaudible click of the shutter is followed by a whirring wind of the film advance clock work mechanism. It sounds much like the Robot camera film advance.

However we were delighted recently to obtain the long awaited pentaprism viewfinder (\$39.90).



TESSINA 35 is the ideal travel companion, always ready to capture the most memorable moments on land, sea or in the air.

We put the prism into one pocket, the camera in another. In seconds we could slip both out, attach them and have a most critical focusing eye level prism reflex. The view through the prism is adequately bright with a fairly coarse ground glass which provides amazing ease of focusing—and from a 25mm lens too. Pin-point focus portraiture by natural light from 9 in. to 3 ft. proved a snap.

Results from the overly large negative area were understandably far superior to what could be achieved in like circumstances with like film of any

ultra or subminiature. Quality approached what could be expected from full sized single-frame cameras.

Once we got the location of the controls down, we found operation of the camera to be fairly easy. Good fingernails to lift out the spring wind and rewind knob are helpful. Incidentally if the whirl of the film advance spring mechanism disturbs you or the subject, just shoot while holding the rewind knob tightly. After shooting, release the rewind knob slowly. The Tessina then becomes as quiet as a mouse.

While you can keep right on using the \$1.25 23-exposure rolls of KB-14 (ASA 20), KB-17 (ASA 40) or KB-21 (ASA 100) the advantages of reloading and shooting your own favorite film—Kodachrome, Agfachrome, Anscochrome, Plus-X, Panatomic-X, etc., while saving money to boot will undoubtedly prove over-powering. With moderate care we were able to load our own easily. With thick-based films such as Tri-X Pan it's advisable to load and let the film "set" in the cartridge for a few days. The extreme curl of the film in the small cartridges will limit the number of shots on each spring winding if the film doesn't have time to adapt itself. Even Tri-X Pan, pulled through with no trouble if loaded at least 36 hours prior to use.

If you buy the already loaded Adox cassette to begin with and ask your processor to return the empties to you, you'll have a supply of cartridges to load yourself. If not, extra cassettes are 95¢ each.

While you can send your Ansco or Kodak color film to almost any independent lab for processing (not to Kodak or Ansco, however), the film will not be returned mounted at present. One lab, Berkey Photo, 77 East 13th St., New York 3, does offer full Tessina color processing facilities plus mounting in Tessina cardboard mounts. However, you can mount your own in special glass binders. A box of 25 cost \$3.95. We tried Kodachrome with Berkey processing and mounting. Results were good although the outlines of the Tessina mounts seemed to have a slightly rough edge. The importer says however that Berkey will soon have new, cleaner-cut mounts. The transparencies projected nicely on a 30 x 40-in. lenticular surface screen. In black and white, Kodak Plus-X Pan gave us good quality to 8 x 10 and Kodak Panatomic-X allowed enlargements to 11 x 14 with results we would accept from larger negatives.

And we simply never could get over those large negatives coming out of that tiny, shiny metal box.—H.K.

25mm f/2.8 Tessinon

Aperture	Center Sharpness	Edge Sharpness
2.8	Very good	Acceptable
4	Very good	Acceptable
5.6	Very good	Good
8	Good	Good
11	Good	Good
16	Good	Good
22	Acceptable	Good

U.S. CAMERA

THE SWISS-MADE Tessina is a true ultra-miniature camera. It is tiny ($2\frac{1}{2} \times 2 \times 1$ ") and light (5 oz.). Its features, however, make it outstanding and unique in that class. The Tessina is the only ultra-miniature that uses standard 35mm film, available anywhere in a variety of black-&-white and color emulsion types. From the standard cassettes the film is reloaded (in daylight) into special Tessina cartridges. The cleverly designed daylight loader is small, light and troublefree.

The Tessina cartridge holds film for 18 color or 21 black-&-white exposures. Since four Tessina cartridges can be loaded from one 36-exposure roll or film, the user gets about twice as many negatives or transparencies from each roll.

The image size is a surprisingly large 14×21 mm, which is only a fraction smaller than the regular 18×24 mm half-frame 35mm image.

At first glance it might seem hard to believe that such a tiny camera could use regular 35mm film, or that it could produce such a large image. The secret is in the use of a front-surface mirror that directs the light emerging from the lens toward the film positioned along the bottom of the camera. That way the path of light is made long enough to accommodate a lens of 25mm focal length. The largest opening of the Tessina lens is $f/2.8$ and it can be stopped down to $f/22$.

At this point a question might occur to you, as it did to me: "Will the interposition of a mirror interfere with the sharpness of the image?" It will not! Image sharpness is bordering on the fantastic. The tiny negative can be blown up to a sharp, grainless 20×24 " print. I make needle-sharp 8×10 " and 11×14 " prints from Tessina negatives as a matter of routine. Panatomic-X film developed in Microdol-X produces extremely fine grain

negatives, as long as the film is *not* overexposed or overdeveloped. I projected Kodachrome-X transparencies made with the Tessina to fill a 60" screen and the projected image was sharp.

In short, the Tessina can be used to make negatives and transparencies that are, for all practical purposes, equal to work done with full size 35mm cameras.

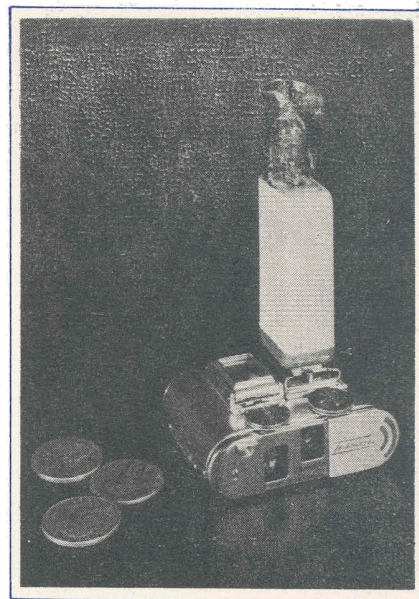
Since a mirror is used between the lens and the film, the image is reversed from left to right. This is corrected during printing by placing the negatives in the enlarger with the emulsion side away from the paper, not facing it, as usually done. Color transparencies are corrected by reversing them in the viewer or slide projector.

The Tessina is a twin-lens reflex camera. One lens takes the picture, while a second, matched lens produces an identical ground-glass image for viewing and focusing. However, the viewing lens is so close to the taking lens that, for all practical purposes, the camera can be used as a single-lens reflex camera. Automatic parallax correction is provided to assure accurate framing for closeups. The lens can be focused and the image accurately framed from infinity to nine inches.

The lenses are recessed in the camera body, eliminating the need for a lens shade. A metal cover protects the lenses when the camera is not in use. The shutter release operates only when this metal cover is fully withdrawn.

The jeweled-shutter and film-transport mechanism of the Tessina is a marvel of Swiss precision. The camera has a spring motor that winds the shutter and forwards the film. Five-to-eight exposures can be made without rewinding—in rapid sequence if desired. The shutter speeds range from $\frac{1}{2}$ to $1/500$. There is also a B setting. The shutter is fully synchronized, with M, F and X settings.

Three types of viewers are available: a pentaprism, a magnifying hood and a sports finder. The sports finder is supplied with the camera, the other two are sold as accessories. I like the pentaprism finder best. It



provides six-times magnification and a clear, easy-to-focus and frame image. With the pentaprism finder both vertical and horizontal pictures are possible.

The magnifying hood magnifies the ground-glass image eight times. It is practical for vertical compositions only. The pentaprism and the magnifying hood finders can be focused to match the eyesight of the photographer.

Since it uses 35mm film, Tessina negatives can be developed in standard 35mm tanks. The 2×2 " Tessina slide binders fit all standard slide projectors.

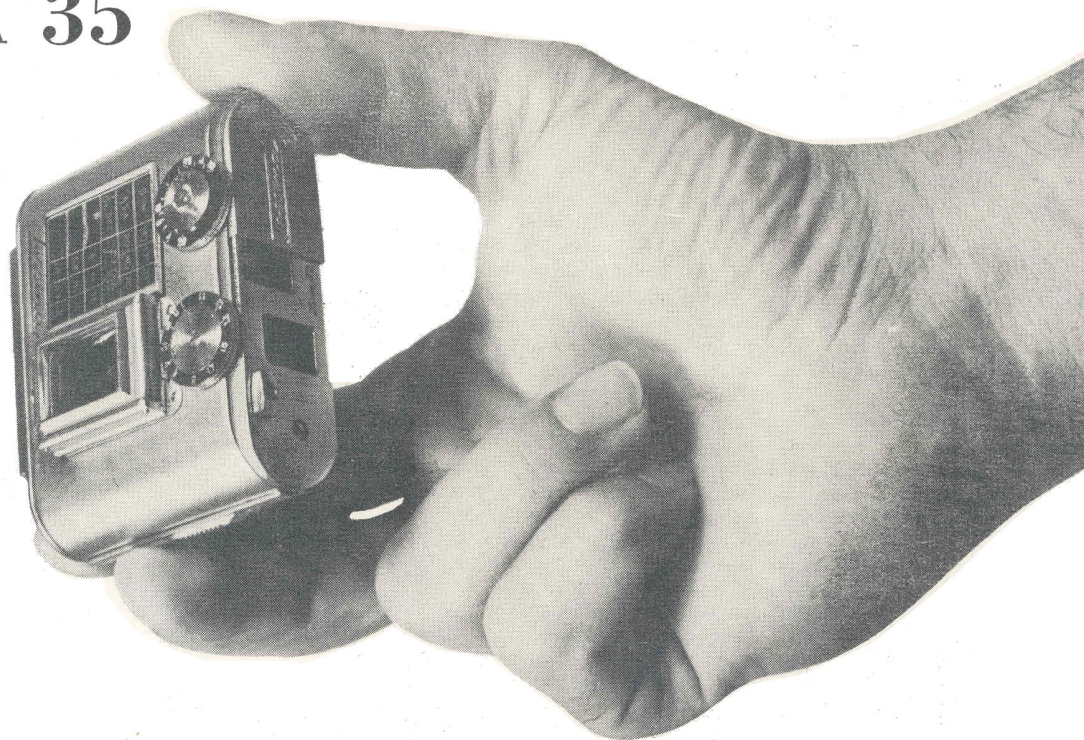
The camera is equipped with an accessory shoe to accommodate the tiny Metraphot exposure meter or a miniature flashgun. With the use of an accessory wrist strap the Tessina can be worn like a wrist watch. A neck chain with a tripod plate and a variety of leather cases are available.

To summarize: the Tessina is in a class by itself. It is an ultra-miniature in size, weight and appearance. It is the world's smallest 35mm camera. The precision and the reliability of the mechanism is matched only in fine Swiss watches (in fact, the Tessina is made by watchmakers). Image quality is superb, it meets professional standards.—Joseph Foldes

PORTION of Tessina negative enlarged approximately 20X shows fine quality possible both in sharpness and grain.



CAMERA 35



SHOOTING THE TINIEST 35

“LADIES and gentlemen, I have here the smallest 35mm camera in the world. Pick it up, look it over, slip it in your pocket. It is the ultimate in fine workmanship to reduce bulk without reducing film size. That’s right, ladies and gentlemen, this little lovely uses standard 35mm film.”

Our imaginary barker convinced us that you’d want to know more about the Tessina, a quality 35 smaller than a pack of cigarettes. Instead of our regular technical editors who are used to testing cameras and quickly adapt to new sizes and shapes, we decided to ask a practicing pro to give the Tessina a try. Douglas Gilbert, the young *Look* Magazine staff photographer we introduced you to in Aug./Sept. 1964 (“College Student Makes *Look*”), agreed to work with it for a while and tell us what he liked and disliked

about it. After two weeks of shooting with the tiny camera in a great variety of situations, he reported back to us.

Doug was extremely pleased with the sharpness of the image. He enlarged to his customary 6x8 inch prints, but could have gone larger without losing image quality. Equally surprising and pleasant was the large image in the reflex finder. And the motor drive was a big extra for a pro shooting a fast-moving subject.

Doug was not happy with the motor whine. Using the small camera to be unobtrusive, the noise attracted attention. “As I stealthily photographed a folk singer in concert in a dim, small auditorium, the whining motor caused several uncombed heads of hair to turn and stare. My ever-thinking wife whispered loudly, ‘Don’t tell them you’re from the FBI,’ which quickly put everyone at ease again

(including myself) as they laughed.”

An unexpected experience for Doug as a pro was the attention the camera attracted. Until you have tested an unfamiliar-looking camera, you have no idea how many photo-hobbyists can hear the whisper of a new lens cap coming off from 100 yards away.

Some of his experiences were typical of a pro with an unfamiliar camera. While shooting at Coney Island, he forgot to wind the motor before starting to take pictures. A large hostile woman throwing sand at him for taking her picture didn’t help him recall the instruction book. But this problem disappeared after he missed the first shot.

Having gotten used to longer focal lenses for his usual magazine work, Doug found that he had to move much closer than expected to fill the frame. (He recommended that all photography students be

GOVERNMENT PHOTOGRAPHY

The Moore-Neubauer Report

Karl Heitz' Tessina 35L

Miniature Marvel Adds 'Mighty Mouse' Meter

The Karl Heitz people have added a "Mighty Mouse" meter to their marvel of miniaturization, the Tessina 35, and added the designation L to the camera.

The Tessina 35L looks and acts like a Tessina 35 should. It is quick and sure and takes pictures surreptitiously in all those surreptitious situations that the CIA, the FBI and others like them—and they are the ones who use the Tessina most—invariably get themselves into.

The addition of the meter should add a confidence to their picture-taking when it doesn't have to be done undercover—like off the wrist or from the belt, which are two ways the camera is often used.

THE METER is little more than an inch long and a quarter on an inch deep. It fits easily into an accessory shoe on top of the camera next to the groundglass viewing screen. For a meter its size, it is very sensitive. It has a measuring range of 100 to 6,000 lumens and an ASA sensitivity scale of 12 to 800. In our tests, which were conducted principally in a windowless office, like many of those found in the Pentagon, and with four cool white fluorescents providing overhead illumination, metered exposures were right every time.

Before slipping the meter into the accessory shoe, the ASA is set in one of two tiny windows on the underside of it. The other window is for DIN readings. ASA/DIN is set by means of a tiny knurled roller just under the light cell. The meter is coupled to the lens opening by setting it at f4 before slipping the meter into the accessory shoe. Once that's done a ball bearing mechanism comes into play to prevent the meter from being accidentally uncoupled from the lens.

Shutter speeds that couple to the meter are shown on top of the meter—1/30, 1/125 and 1/500. The intermediary speeds of 1/60 and 1/250 are indicated by white strokes between 1/30 and 1/125 and 1/125 and 1/500. The shutter speed dial is on a side of the camera. The range is from 1/2 second to 1/500 second and B.

ONCE THE ASA speed has been determined and the lens opening set at f4 and the meter locked in place, a reading can be taken in the standard reflected manner. This is done by simply turning the diaphragm ring, which sits immediately in front of the meter, until the speed dial positions itself beneath the pointer of the exposure needle, at whichever of the five shutter speeds may be desired. The proper f stop opening will appear automatically in a small window on the diaphragm ring.

Smaller than most cigarette packs today, and able to fit easily inside an empty pack of regulars, the Tessina can get off 8 to 10 frames on one winding of a spring wind film advance knob. A roll of film for the Tessina can be cranked off with 2 or 3 windings (a roll of black-and-white has 23 frames, of color, 18).

The camera has a haze-filtered Tessinon 25 mm f2.8 lens, which we found to be fast enough to cover most light situations. It was more than fast enough while we were using Tri-X rated at ASA 400 and making copies of documents in our windowless, fluorescent-lighted office.

A **SIGNIFICANT** feature of the Tessina is that it uses regular 35mm film. This gives it a capability that most other subminiatures don't have. It permits the use of any 35mm film being manufactured today, from the low speedsters like Kodak's FX-Pan

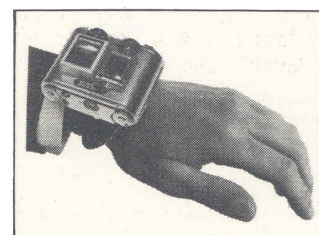
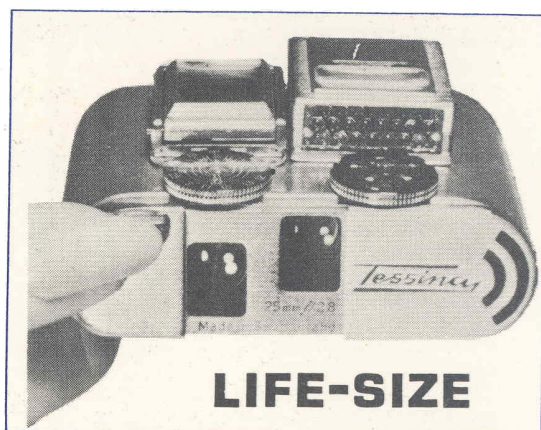
all the way to its new, super-powerful 2485. Film used in the Tessina is processed as simply and conveniently as film used in any 35mm camera.

The camera requires the use of special film cassettes, but there are no problems obtaining them, and they can be easily bulkloaded.

The Tessina produces a negative 14x21mm in size, about a half-inch by 3/4 of an inch, which is approximately a third the size of a regular frame of 35mm.

Viewing is done in either of three ways—through a waistlevel groundglass, through an eyelevel sports finder, or through an accessory prism finder. In copying documents, we found that standing at an ordinary desk, and looking down, an 8½x11-inch sheet of paper fills the frame almost exactly.

The camera comes with a number of ingenious accessories, like a tripod plate which fits over the back of the



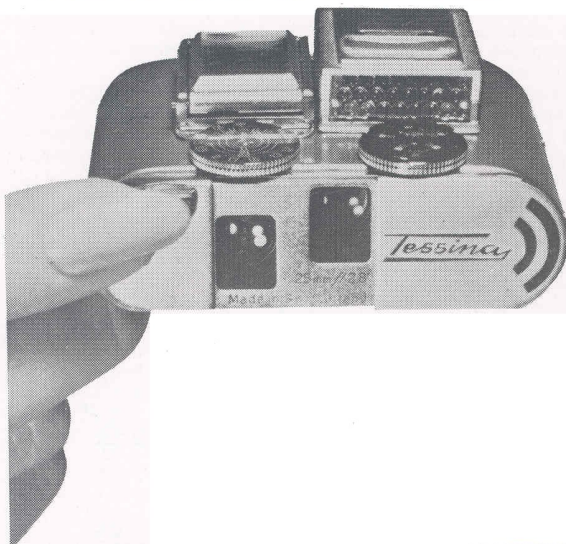
camera and a wriststrap so the camera can be worn like a wristwatch. Other accessories include a close-up and copy stand, a flashgun, bulk film loader, remote electric or pneumatic releases, and a series of filters—yellow, green, red, and infra red.

New on the GSA schedule (GS-00S-71554, Special Item No. 20-275), the Tessina 35L (and the Tessina 35) comes in chrome and black finishes. It also comes in red and gold—for lady spies?

Lab report

POPULAR
PHOTO-
GRAPHY

TESSINA 35L



Camera Type:	Sub 35-mm twin-lens reflex, using 35-mm film in special 18-20 exposure cassettes.
Lens:	Tessinon 25-mm <i>f</i> /2.8; min. focus, 12 in. Diaphragm closes to <i>f</i> /22
Shutter:	Between-the-lens; 1/2 to 1/500, plus B
Viewfinder:	Groundglass plus slip-on sports finder
Flash Synchronization:	M, X
Film Transport:	Spring-wound automatic film advance and shutter cocking
Other Features:	Coupled meter (optional), cable socket
Weight:	5 1/2 oz.
Dimensions:	2 1/2x2x1 in.
Accessories:	Wrist strap, focus magnifier, tripod plate
Distributor:	Karl Heitz, Inc., 979 Third Av., N.Y.C. 10022

FIELD CHECK

When I was first asked to test the Tessina 35L, I didn't quite know whether to laugh it off or not. After all, what respectable pro would go out on a job with such a tiny camera? But it only took me a few rolls of film to gain a healthy respect for this precision device.

I got excellent 8x10s, using even fast films such as Kodak Tri-X, from the 14x21-mm Tessina negatives. Of course, the main secret is in the processing—fine-grain development, great care to equalize processing and washing temperatures—and a good, sharp enlarging lens. But, of course, your camera's lens must first resolve a sharp image on the film. And unless the shutter, diaphragm, and exposure meter are also functioning right on the button, no amount of critical handling in the darkroom can enable you to produce clean, sharp prints at the more than 12X magnification needed for an 8x10 print from the small Tessina negatives. The Tessina I tested was functioning with all systems "A-OK."

Because it is such a small camera, you can handle and carry the Tessina in a variety of ways. I chose a wrist strap, so that I could carry the camera around with me as if it were a watch. By wearing the Tessina just under my jacket sleeve until ready to shoot, I was able to get some interesting photos that larger, bulkier equipment would have made more difficult if not impossible. The fact that the camera was on my wrist somehow made using it seem less conspicuous than is the case with most other subminiature cameras.

If you are in the spy business, you probably already know that the camera can be focused as close as 12 inches. So far as focus is concerned, photographing papers and documents in tight areas is relatively easy. But the maximum lens aperture of *f*/2.8 makes the really dim-light situations a little tough. Despite its smallness (or perhaps because of it, and the resulting low inertia of the camera) shooting at slower than 1/60 sec can lead to lack of sharpness. And when you've got

such small negatives, sharpness is essential.

Both the coupled meter and the viewfinder hood will slip off the camera body. Taking them off makes for less bulk. Of course, without the hood, seeing through the small viewfinder groundglass becomes more difficult, and you have to be pretty good at exposure-guessing without the meter. But it's simple to make bracketed exposures because the spring-wound, automatic film advance mechanism permits fast shooting. One disadvantage here, however, is that the cassettes will hold only enough film for about 20 exposures. When you bracket-shoot, you can use up that much film quickly.

The Tessina cassettes are made of thin plastic, and I found that I had some fogging troubles at first—at least until I learned to take seriously the manufacturer's advice about loading and unloading the camera in subdued light.

I have a Tessina cartridge loader (the manufacturer calls it a daylight selfloader for bulk film, but it accepts standard 35-mm cassettes—not bulk film), so reloading into them from standard 35-mm cassettes proved to be no trouble. If you intend to get into Tessina photography, I strongly advise you to get the loader for convenience.

Do-it-yourself darkroom people will have to get used to printing the negatives from the Tessina with the emulsion facing away from the sensitized surface of their printing papers. The internal reflex mirror of the camera causes the image to land on the film laterally correct—which, compared to the standard of other cameras, is wrong side around.

Having worked with this truly precise, tiny camera, I came away with the impression that the Tessina is potentially a serious piece of photo equipment. I would definitely choose the Tessina over the teenie-tiny format of most other subminiatures.—Harvey Zucker



979 THIRD AVENUE, NEW YORK, N.Y. 10022



Mr. Phil Sanford
5733 Richardson Road, Route # 3
Howell, Mich 48843

June 2, 1966 vk

EQUIPMENT

TESSINA CAMERA WITH ACCESSORIES # 363113

Date of purchase.

May 25, 1966

Thank you for sending us your registration card.

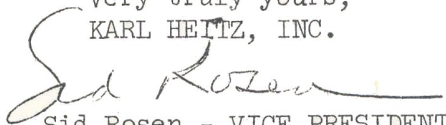
We are pleased to enclose our Guarantee Card (and Import Certificate), which is your guarantee against any original defects in workmanship and materials.

Our franchised dealers or our New York office will be glad to give you any additional information you may require.

For your convenience we include our latest literature and prices. Please use the enclosed reply card in requesting additional literature, for yourself as well as for your friends, you may like to inform.

We appreciate your confidence in our equipment and hope that it will serve you to your entire satisfaction.

Very truly yours,
KARL HEITZ, INC.


Sid Rosen - VICE PRESIDENT

Enclosures: Literature, Reply Card.

Dealer:

Altman Camera Co.
16 S. Wabash
Chicago, Ill.

Tessina® 35L WORLD'S SMALLEST 35mm CAMERA

A Technical Miracle of Swiss Chronometer Precision. carried as conveniently as a wallet, watch, lipstick or pack of cigarettes —always ready to shoot— anytime, anywhere.

SMALLER AND LIGHTER: Lightweight (5½ ounces), compact (2½x2x1"), smaller than a pack of cigarettes, and any 16mm subminiature camera, but . . .

LARGE IMAGE: 14x21mm picture is 2 to 3 times larger than that of other subminiature cameras.

CHOICE OF 35mm FILM. Takes any standard 35mm color or black and white film, but . . .

MORE ECONOMICAL: Same film length renders 2½ to 3 times as many pictures as standard 35mm camera.

EVER READY: Pressing the button takes the picture, counts the exposure, transports the film and cocks the shutter, readying the TESSINA for the next shot.

AUTOMATIC FILM TRANSPORT: Swiss precision miniature motor provides 8-10 pictures without rewinding, ideal for rapid action photography.

AUTOMATIC LIGHT READING: TESSINA 35 L with cross-coupled exposure meter.

TWIN-LENS REFLEX: 2 reflex systems with parallax-corrected lenses.

NEEDLE SHARP: High resolution TESSINON 25mm f/2.8 renders precise color fidelity, critical sharpness and authentic contrasts, suitable for bigger-than-lifesize enlargements and projection. Angle of view 53°.

GROUNDGLASS IMAGE: Through-the-lens viewing for accurate framing, focusing and depth-of-field control.

CHOICE OF DISTANCES: Continuous focusing from infinity down to 9" for close-ups, but TESSINA may also be PRESET for universal distance range.

CHOICE OF LENS STOPS: From f/2.8 to f/22.

CHOICE OF SPEEDS: Swiss precision movement with speeds from ½-1/500 seconds and B.

CHOICE OF SYNCHRONIZATION: M or X, attachable Tessina flashgun.

CHOICE OF FINDERS: Reflex and Sports-finders permit waist level, eye level and 90° angle shots, can be replaced by field lens, 8X magnifier or 6X prism-finder.

CHOICE OF FILTERS: Complete set of haze, yellow, green, red filters.

CANDID SHOTS: In your hand or pocket, on its wrist-strap or neckchain, the TESSINA is ideally suited for taking unsuspected pictures.

JEWELLED MECHANISM: Ruby stones as used in fine Swiss watches eliminate friction and wear, guarantee smooth operation.

17 JEWEL WATCH: Attaches easily to accessory clip of TESSINA 35.

EASY PROCESSING: Any finisher who processes 35mm film—any 35mm tank.

CHOICE OF ENLARGER: Giant enlargements, up to 20x24" and beyond, with standard 35mm enlargers.

CHOICE OF PROJECTOR: Any 35mm projector, with cardboard or glass mounts and NEWTON-ring-free glass.

EASY FIT: Can be conveniently carried all year, in coat, hip or shirt pocket, on your belt, in a lady's purse, folio, etc.

EASY TO USE: Detachable plate on camera with brief instructions for use.

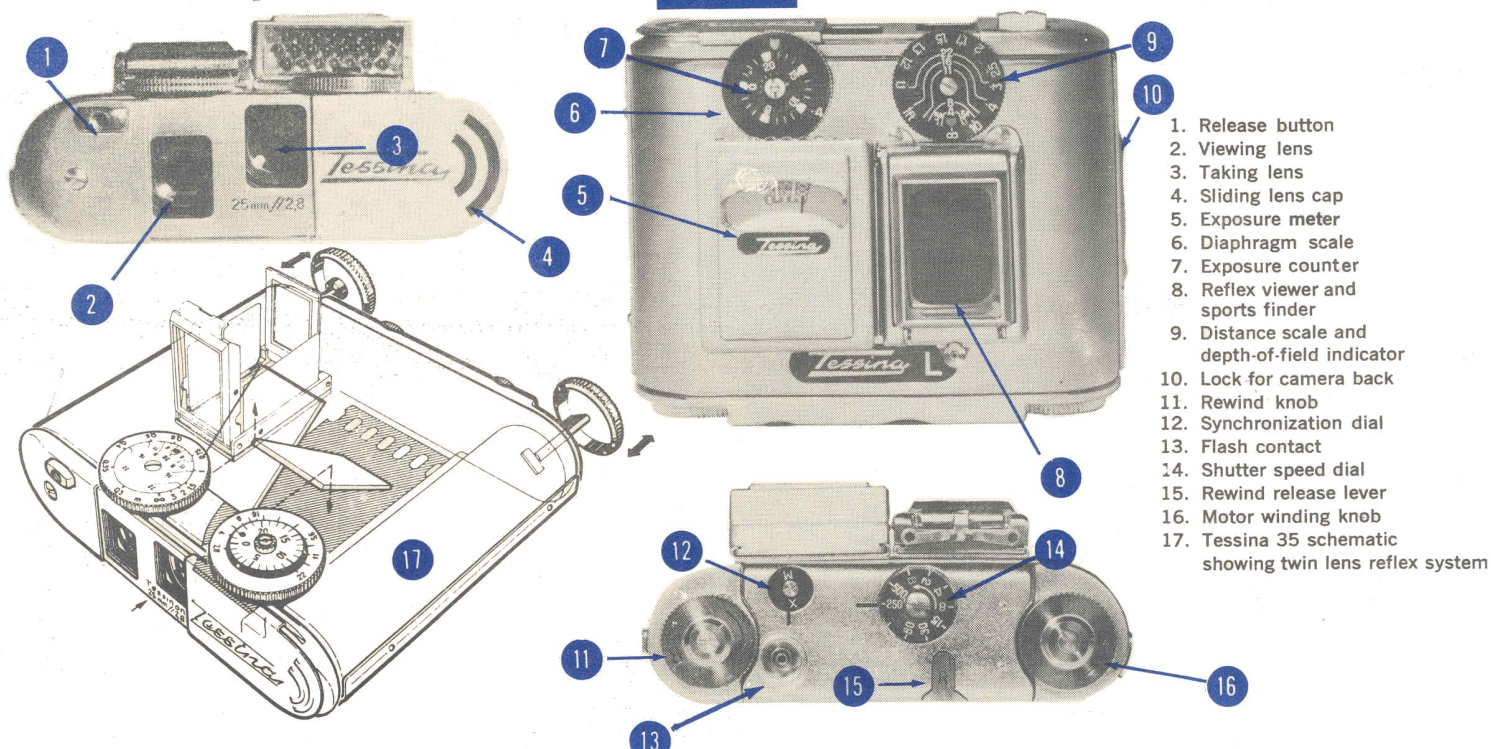
CHOICE OF LEATHER CASES: Hard compact case and soft zip bags.

CHOICE OF COLORS: The TESSINA is available in chrome, black, red or gold finish.

PROTECTION: Shockproof construction withstands the most rugged use, for lifelong durability.

SWISS CHRONOMETER PRECISION: Custom-built with meticulous precision like a fine watch, as only the famous watchmakers of Switzerland can do it.

SWISS QUALITY CONTROLS: Meeting the most rigid precision standards, every TESSINA is scrupulously quality controlled, carries a world wide guarantee.



Tessina® 35 THE ONLY SUBMINIATURE THAT REALLY MAKES SENSE!

979 THIRD AVENUE, NEW YORK, NY 10022 • (212) 421-5220

TR 10 M 68

EUROPEAN PRECISION EQUIPMENT

ALPA • TESSINA • ROBOT • CARENA • KINOPTIK • CERCO • GITZO • PRIMOS
VOLOMAT • LINDIA • KERN • OMAG • OMEGA ELECTRONIC • FI-CORD

For a rigid shooting test we turn this postage-stamp camera over to a working pro. Here's his report on two weeks with the Tessina.

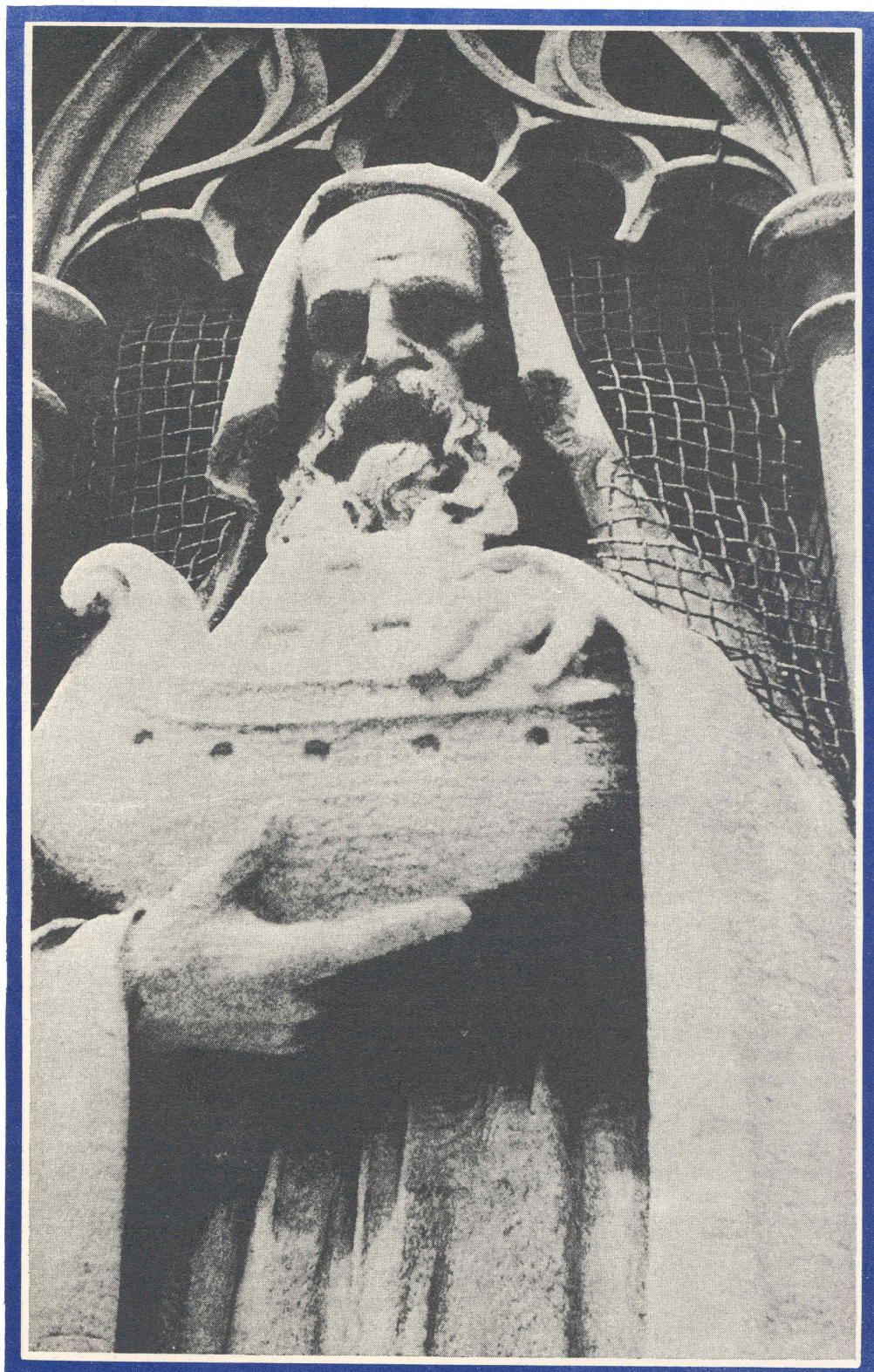
required to use the Tessina for six months. They would get used to filling the frame or have to work on negatives to pull the images out of the background.)

Since Doug uses Tri-X for his magazine work, we asked him to stick to it for a realistic test. But we didn't expect to make him work as hard as he did. He had no trouble loading Tri-X into the cassettes, emptied of the commonly used Adox-14. But he did encounter an unusual problem. The Tri-X had to be loaded into the Tessina cassettes for a couple of days before use. Apparently the degree of curl needed to fit the thicker film to the smaller diameter cassette was something the film had to learn in storage.

Doug makes a strong plea for the extra viewfinder which gives an enlarged image. Otherwise you will have trouble framing except in outdoor photography. The extra finder slips on and off very easily and is inconspicuously stored in its own loop inside the carrying case.

By way of summary, the Tessina came through the most difficult test with flying colors. It may not be the ideal camera for available darkness pictures. But for the majority of pictures in black and white or color, this tiny marvel is a big performer. Whether you use your 35 for pictorials, note-taking or document copying, Tessina can compete with its bigger relatives. If camera size is a factor, Tessina is the hands-down winner.

QUALITY of blow-up from minute negative (actual size contact shown here) surprised Gilbert. With camera 18" from statue, he shot Tri-X at f/5.6 for 1/125.



Tessina 35 TINIEST CAMERA FOR BIGGER THAN LIFESIZE PICTURES.

Tessina ACCESSORIES

NUMBER PRICE

CASES

1. Compact brown leather case
Same, in black
De luxe blue or green and gold zipper case
Black leather zip case, w/hand strap
2. Same, for TESSINA and prismfinder, or magnifier or 2 film cassettes

CA2105/30T	7.95 ▲
CA2305/30T	7.95 ▲
CA2505/30T	7.95 ▲
CA2605/30T	7.95 ▲

CA2706/65T	9.95 ▲
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INTER-CHANGEABLE FINDERS

1. Prismfinder (6X magnification)
2. Magnifier (8X magnification)
3. Field lens
Reflex and sports-finder (spare part)
Plain sports finder attachable to accessory shoe

AC3226/65T	39.95 ▲
AC3413/30T	19.95
AC3004/00T	5.95 ▲
SP3606/65T	9.95
AC3803/30T	4.95

ACCESSORIES

1. 17 Jewel Swiss precision watch, attaches to Tessina
Complete filter set (haze, yellow, green, red)
One filter only (please give tint)
Tripod plate with neck chain
2. Wrist strap
4. TESSINA flashgun, w/leather case
Bracket attachable to tripod plate
Attachable METRAPHOT exposure meter, case
Same, w/supersensitive element incl. leather case
TESSINA binders w/NEWLO glass, Box of 25
Rapid fastener for TESSINA binders
TESSINA Cardboard mountsBox of 100
Film trimmer for TESSINA binders and mounts
7 Watt spare bulb for trimmer
Cable release with set screw
Remote air release with bulb (16.5')
16.5' extension for air release

AC3920/00T	29.95
AC3110/00T	14.95 ▲
AC3302/65T	3.95 ▲
AC4004/65T	6.95 ▲
AC4204/00T	5.95 ▲
AC4806/65T	9.95
AC4102/00T	2.95
AC4413/00T	19.50
AC4617/00T	25.50
AC4302/65T	3.95
AC4502/00T	2.95 ▲
AC5902/65T	3.95
AC4711/00T	16.50
SP4900/75T	.95
AC5702/00T	2.95
AC556/65T	9.95
AC592/00T	2.95

FILMS, SELF LOADER, CASSETTES

1. ADOX black and white / ASA 20: 24 exposures
ADOX black and white / ASA 40: 24 exposures
ADOX black and white / ASA100: 24 exposures
KODAK Tri-X black-and-white on Estar base /ASA 400: 24 exposures
2. KODAK Kodachrome II daylight color/ ASA 25:18 exp.
KODAK High Speed Ektachrome daylight color / ASA 160: 18 exposures
KODAK Ektacolor S negative color ASA 80 : 18 exp.
3. Daylight self loader with 1 TESSINA cassette
4. TESSINA cassette with can

FM6000/85T	1.25 ▲
FM6200/85T	1.25 ▲
FM6400/85T	1.25 ▲
FM6601/00T	1.45 ▲
FM6801/30T	1.95
FM6101/30T	1.95 ▲
FM6301/30T	1.95
AC6504/65T	6.95
AC6700/65T	.95

BOOKLETS

- TESSINA 2-color leaflet
TESSINA 2-color reprints from Popular Photography, Modern Photography, U.S. Camera

B06000/00T	no charge
B06200/00T	no charge

PHOTOFINISHERS WHO PROCESS, MOUNT, AND ENLARGE 35mm FILM TAKEN WITH THE TESSINA CAMERA

Knox Photo Service, Inc., TESSINA Dept., 410 Salem Street, Medford, Mass.
Berkey Photo, TESSINA Dept., 12 Henley St., Boston 29, Mass.
Berkey Photo, TESSINA Dept., 77 E. 13th St., New York 3, N.Y.
Modernage, TESSINA Dept., 6 West 48th St., New York, 36 N.Y. (B & W Only)
Perfect Photo, TESSINA Dept., 4747 N. Broad St., Phila., Pa. 19141
Continent. Process. Lab, TESSINA Dept. 633 NE 125th N. Miami, Fla.
Perfect Photo, TESSINA Dept., 2717 N. Lehaann Ct., Chicago, Ill. 60606
Vazis Camera, TESSINA Dept., 7167 Manchester, Maplewood, Mo. 63143
Microfilm Systems TESSINA Dept., 716B N. Weber, Colorado Springs, Colo.
Perfect Photo, TESSINA Dept., 1810 W. Pico, Los Angeles, Cal. 90006
Western Submini. Lab., TESSINA Dept., Box 48404, Los Ang. 48, Cal.
San Bruno Camera Co., TESSINA Dept., 505 San Mateo Ave., San Bruno, Calif.
N.W. Custom, TESSINA Dept., Univ. Sta., Box 16, Seattle 5, Wash.
KODAK, ANSCO, AGFA etc. process

35mm film taken with the TESSINA. They do not mount TESSINA slides



Tessina 35 The ONLY subminiature that makes sense!

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TC-10MC-366

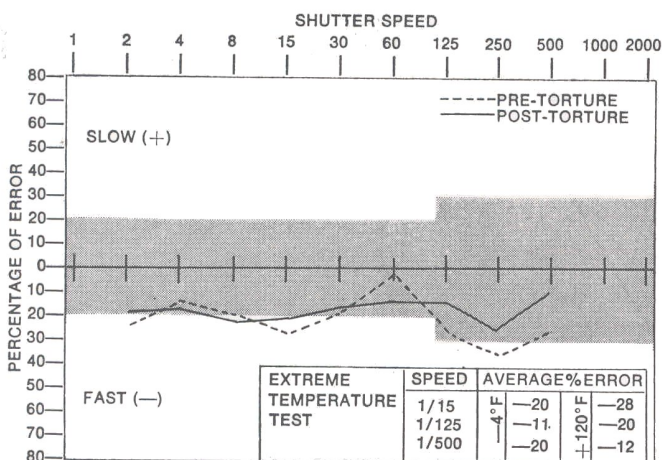
ALPA • TESSINA • ROBOT • CARENA • KINOPTIK • PRIMOS • VOLOMAT • LINDIA • KERN • OMAG • MAYACORD • FI-CORD • ASTROLUX

INSTRUMENT READOUTS

CAMERA: TESSINA 35 No. 865643

LENS: 25-mm TESSINON F/2.8

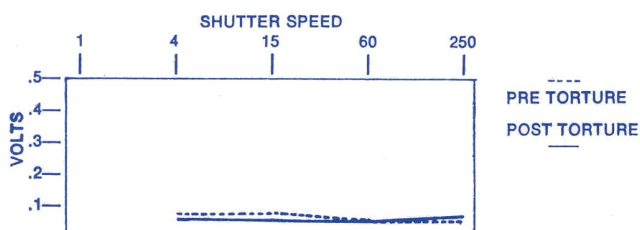
SHUTTER PERFORMANCE: Most errors are within tolerances; since all are on fast side, they can easily be adjusted for accuracy.



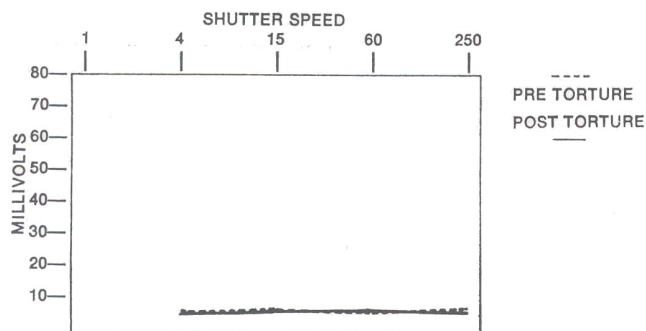
Suggested USA (formerly ASA) shutter accuracy standards are shown by shaded area. Higher speeds have more tolerance.

SHUTTER TRIP AND TRAVEL: The gentle release of the Tessina is especially appropriate for the low inertia of this tiny camera.

VIBRATION LEVEL: The Tessina shows less vibration than all the more conventional cameras tested, putting it in the Minox league.



NOISE LEVEL: This, too, is below level of conventional cameras.



Noise and vibration standards do not exist, but relative levels become evident when charts for several cameras are compared.

METER SPECIFICATIONS:

Type: Selenium	Zeroing provision: No
Accuracy: Within 1/4 stop	Parallax: No
ASA range: 12-800	Battery test: —
Acceptance angle: 40 degrees	
Response discrimination: Good	
Accessories: None	Scale legibility: Fair
Movement balance in various positions: Fair	

LENS PERFORMANCE: Because of the camera's design, the mirror that "folds" the image was considered to be part of the optical system, and therefore all tests performed included the mirror in the system. When off-axis tests were at first somewhat disappointing, the mirror was suspected. Sure enough, there was a smudge on it—my fault. Results with a clean mirror were very much improved. So, take care: when changing film, keep your fingers clear of the mirror chamber to assure the best possible results.

Electronic bench tests indicate that the lens has very good contrast, with the center region peaking at $f/4$. Even at the short edge of the frame (which is quite a pronounced oblong), the optimum was reached by $f/5.6$. On the long side of the oblong, where the lens must cover a field of more than 47 degrees, $f/8$ was needed to optimize performance.

The lens appears to be up to yielding good results on the small, 14x21-mm negative. Color faps should be pleased with it too, as the residual chromatic aberrations were very small.

All of this speaks well for the entire system, both lens and mirror. The latter has just as important a role as the former and too often is considered to be a non-critical component. A mirror not perfectly flat, when placed in the ray-path of a lens, can introduce aberrations (astigmatism, etc.) of which the lens itself may not be guilty.

Conclusion: Because of the small negative, the camera requires a very well corrected lens to answer the demands of greater than average enlargements. This lens can meet those demands.

MISCELLANEOUS DATA

	PRE-TORTURE	POST-TORTURE
Focusing System: Groundglass and Sports Finder		
Range	1 ft—∞	1 ft—∞
Accuracy over range	∞ 5M 1M	∞ 5M 1M
	OK OK OK	OK OK OK
Shutter-trip force:	265 gm	250 gm
Shutter-trip travel:	1-1/2-mm	1-1/2-mm
Self-timer:		
Minimum	—	—
Maximum	—	—
Viewfinder: Twin-lens reflex		
Framing Accuracy	OK	OK
Parallax Corrected	No	No
Synchronization: Std. PC outlet		
Flashbulb	8 msec	7 msec
Strobe	0.0 msec	0.0 msec
Contact Resist	0.4 Ω	0.5 Ω
Insulation	OK	OK

STRIPDOWN REPORT

	Interior	Exterior
Material choice:	Good	Good
Assembly, Finish:	Good	Good
Repair access:	Good	Good
Adjustment provision:	Good	Good
Do frequently made adjustments require major stripdown?	No	No

Comments: There is a confidence-inspiring utilization of space without undue miniaturization of parts. Typical of the good design practices is the placement of the mainspring inside of the take-up spool. The watchmaker's touch is evident elsewhere, though—the slow-speed gear train features jeweled bearings, for instance.

Conclusion: A very clever design, in which every cubic centimeter has been utilized without unnecessarily complicating the various modules. However, the small size dictates fine parts, and close tolerances, so it must be kept clean —Norman Goldberg



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New York, NY 10022
(212) 421-5220

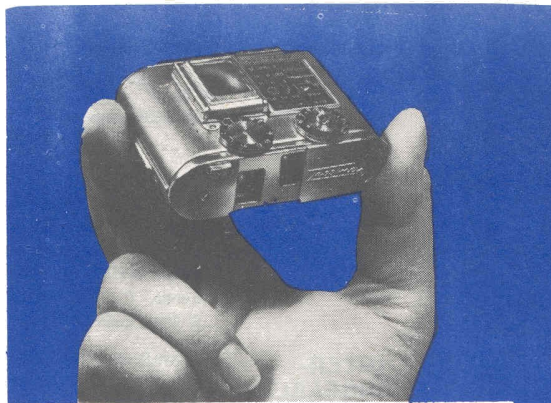
EUROPEAN PRECISION EQUIPMENT

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TLR20M/49

Tessina 35

WORLD'S SMALLEST, LIGHTEST 35mm CAMERA



2

A Technical Miracle of Swiss Chronometer Precision, carried as conveniently as a wallet, watch, lipstick or pack of cigarettes — always ready to shoot, anytime, anywhere.

SMALLER AND LIGHTER: Lightweight (5½ ounces), compact (2½x2x1"), smaller than a pack of cigarettes, and any 16mm subminiature camera, but...

LARGE IMAGE: 14x21mm picture is 2 to 3 times larger than that of other subminiature cameras.

CHOICE OF 35mm FILM. Takes any standard 35mm color or black and white film, but...

MORE ECONOMICAL: Same film length renders 2½ to 3 times as many pictures as standard 35mm camera.

EVERREADY: Pressing the button automatically takes the picture, counts the exposure, transports the film and cocks the shutter for the next shot.

AUTOMATIC: Swiss precision miniature motor provides 5-10 pictures without rewinding, ideal for rapid action photography.

TWIN-LENS REFLEX: 2 reflex systems with parallax-corrected lenses.

FAST AND SHARP: Haze-filtered TESSINON 25mm f/2.8 renders color corrected picture of critical sharpness and contrast, suitable for large-size projection and enlargements. Angle of view 53°.

GROUNDGLASS IMAGE: Through-the-lens viewing for accurate framing, focusing and depth-of-field control.

CHOICE OF DISTANCES: Continuous focusing from infinity down to 9" for close-ups, but TESSINA may also be PRESET for universal distance range.

CHOICE OF LENS STOPS: From f/2.8 to f/22.

CHOICE OF SPEEDS: Swiss precision movement with speeds from ½-1/500 seconds and B.

CHOICE OF SYNCHRONIZATION: M or X, attachable Tessina flashgun

CHOICE OF FINDERS: Reflex and Sports-finders permits waist level, eye level and 90° angle shots, can be replaced by field lens, 8X magnifier or 6X prism-finder.

CANDID SHOTS: In your hand or pocket, on its wrist-strap or neckchain, the TESSINA is ideally suited for taking unsuspected pictures.

JEWELLED MECHANISM: Ruby stones as used in fine Swiss watches eliminate friction and wear, guarantee smooth operation.

17 JEWEL WATCH: Attaches easily to accessory clip of Tessina.

CHOICE OF ENLARGER: Up to 20x24" and beyond, with standard 35mm enlargers.

CHOICE OF PROJECTOR: 2x2 glass or cardboard binders for any 35mm projector.

PROTECTION: Shockproof construction withstands the most rugged use.

EASY FIT: Can be conveniently carried all year, in coat, hip or shirt pocket, on your belt, in a lady's purse, folio, etc.

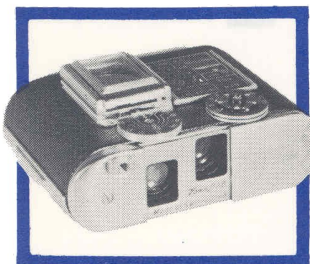
EASY PROCESSING: Any finisher who processes 35mm film—any 35 mm tank.

EASY TO USE: Detachable plates on camera with brief instructions for use and exposure guide.

CHOICE OF COLORS: The TESSINA is available in chrome, black, red or gold finish.

SWISS CHRONOMETER PRECISION: Custom-built with meticulous precision like a fine watch, as only the famous watchmakers of Switzerland can do it.

SWISS QUALITY CONTROLS: Meeting the most rigid quality standards, every TESSINA is scrupulously quality controlled, carries a world wide guarantee.



TESSINA 35

COMPLETE TESSINA KITS

w/Tessinon 25mm f/2.8, detachable reflex- and sportsfinder and lens brush, in chrome finish

Same, in red finish add

Same, in gold finish add

Same, in black finish add

#1 TESSINA KIT (in white display box):

1 TESSINA in chrome finish, 1 Leather Case,

1 TESSINA Flashgun with Leather Case, 6 AG-1 Bulbs,

4 Black-and-white films: 1 Roll each ADOX ASA 20

ADOX ASA 40

ADOX ASA 100

KODAK Tri-X black-and-white on Estar base ASA 400

3 Color films: 1 each KODAK Kodachrome II ASA 25

1 each KODAK High Speed Ektachrome ASA 160

1 each KODAK Ektacolor S ASA 80

TESSINA KIT #1 SAVINGS: \$4.73

Same with TESSINA in black (red or gold) finish....add

TESSINA KIT (in white display box):

Same as #1 TESSINA KIT plus:

1 Magnifier 8x,

1 Tripod Plate w/ Neck chain

TESSINA KIT #2 SAVINGS: \$6.63

Same with TESSINA in black (red or gold) finishadd

Same with prismfinder 6x instead of magnifier 8xadd

NUMBER PRICE

C10099/70T 149.50

C12006/70T 10.00

C14006/70T 10.00

C16006/70T 10.00

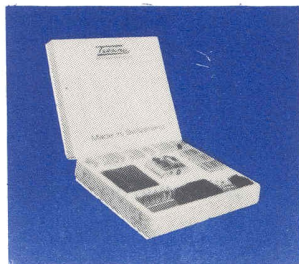
K10116/35T 174.50

K11006/70T 10.00

K20133/00T 199.50

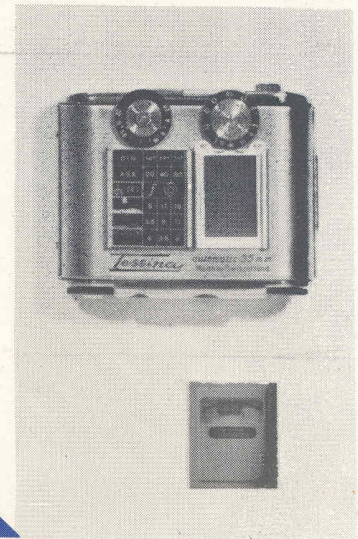
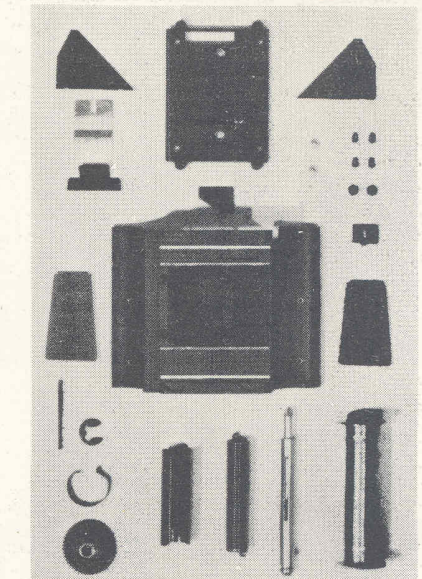
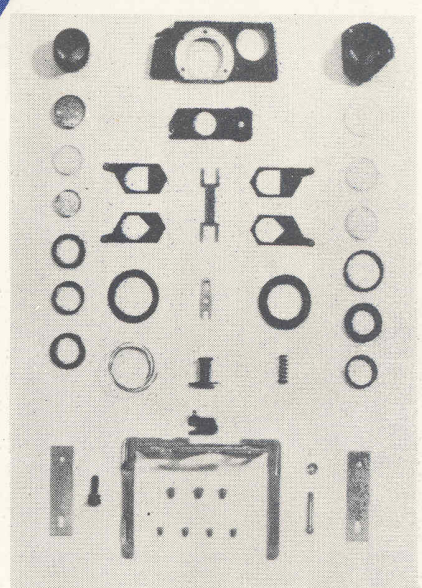
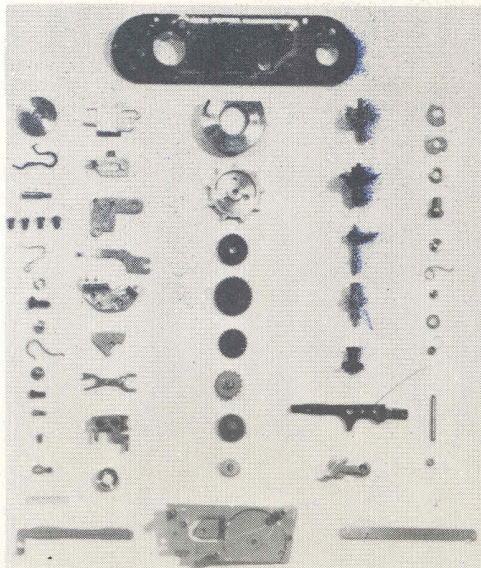
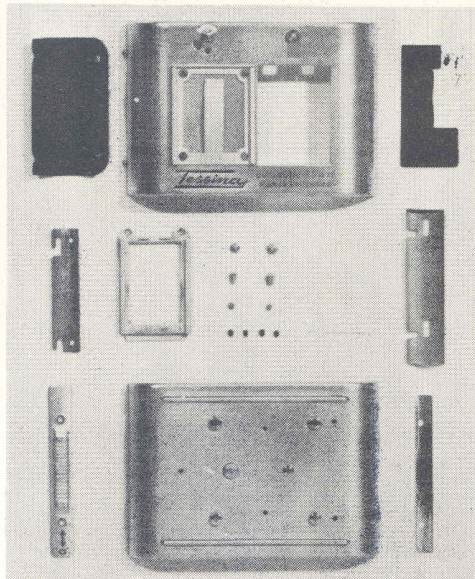
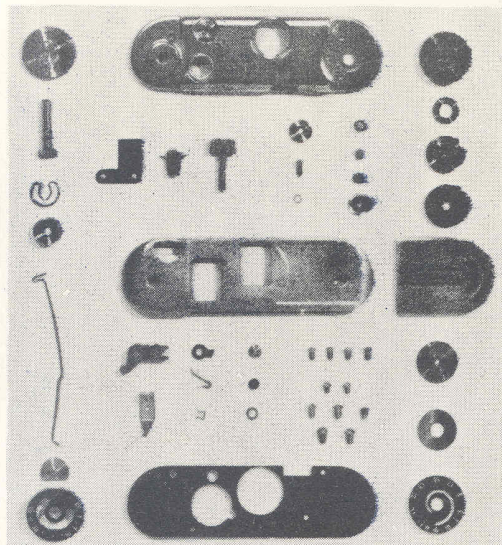
K21006/70T 10.00

K22013/35T 20.00



Tessina 35L

A MASTERPIECE OF PRECISION QUALITY CONTROL



1. Located in the heart of the Swiss watch industry, the TESSINA factory with its limited production is geared to the most rigid precision standards.
2. Each TESSINA is custom built with inimitable chronometer precision, literally to your order, like the finest Swiss watch.
3. TESSINA'S highly skilled Swiss master craftsmen are trained in the art of watchmaking during half their lifetime.
4. Each TESSINA part, gear, pinion, etc. is manufactured with the same tolerances as those for Swiss watches, supplied by the TESSINA factory for many decades.
5. Manufacturing a TESSINA means meticulous assembling of close to 400 minute precision parts.
6. TESSINA camera makers work with a watchmakers magnifying lens attached to their eye all day.
7. Each TESSINA part is individually quality controlled twice, during manufacturing and before assembling.
8. TESSINA parts are made of highest quality material, with chrome, nickel or even gold finish to prevent oxydation, for lifelong service.
9. TESSINA precision parts are cleaned with an ultrasonic machine, operating at 500 Kilocycles.
10. High precision machines for critical part controls work at tolerances up to $1/1000\text{mm}$ ($0.00003937''$).
11. Ruby stone jewels such as used in fine watches eliminate friction and wear of TESSINA mechanism, guarantee smooth operation.
12. All TESSINA shutter speeds are electronically tested, for utmost accuracy.
13. Special lubricants guarantee near-constant shutter speeds, even under extremely cold or hot climatic conditions.
14. M and X synchronization (up to $1/500\text{th}$ second) are tested at a low 4 Volt and a high 500 Volt.
15. TESSINA shutters are released 2000 times before leaving factory, are geared for more than 50,000 operations.
16. Each TESSINA lens is individually film tested, handpicked for you, carries an unconditional guarantee for optical excellence.
17. Numbered testfilm for each TESSINA lens shows even illumination, critical sharpness, authentic tonal values and perfect contrast.
18. Exceptionally solid construction withstands the most rugged use, for lifelong durability.
19. Over 50% of factory personnel is engaged in the most severe, total quality controls, using highly specialized testing instruments.
20. Unconditional TESSINA guarantee for highest mechanical and optical performance, with world wide warranty.



35
YEARS

Tessina 35

25
YEARS

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WOODSIDE, N.Y. 11377 • (718) 565-0004

WORLD'S SMALLEST, LIGHTEST 35MM CAMERA
FULL 5 YEAR WARRANTY

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MARCH 1, 1985

Please print or use rubber stamp Date: _____
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NAME _____ PROFESSION _____
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CITY _____ STATE/ZIP _____

QTY.	ITEM	PRICE
—	TESSINA 35 camera only.....	399.95
—	TESSINA 35L camera with coupled exposure meter.....	499.95
—	TESSINA exposure meter only (incl. installation in our service dept.)..	100.00
—	TESSINA 35 Kit No.1 (in white display box): 1 TESSINA 35 chrome, 1 Compact Leather Case, 1 Flashgun with Case, 6 AG-1B Bulbs, 1 each KODAK Panatomic-X, Plus-X and Tri-X Black & White films, Ektachrome X Color film.....	449.50
—	TESSINA 35 Kit No.2 (in white display box): Same as Kit No.1 PLUS: 1 Magnifier 8x, 1 Tripod plate with neck chain.....	519.50
—	TESSINA 35 Kit No.3 (in white display box): Same as Kit No.2 WITH: 1 Prismfinder 6x instead of Magnifier 8x.....	569.50
—	TESSINA 35 Kits No.1, No.2 or No.3 with TESSINA 35L with coupled exposure meter.....add	100.00
—	TESSINA 35 in black red gold finish.....add	30.00
—	TESSINA 35 noiseless, without spring motor, in black finish.....add	80.00
—	TESSINA 35 noise-reduced, with nylon gears, in black finish.....add	100.00
—	TESSINA Compact hard leather case, attachable to belt.....	29.95
—	Same, earlier model, slightly used, for TESSINA 35 without meter.....	14.95
—	TESSINA Sports and reflex finder (spare part).....	29.95
—	TESSINA Prismfinder (6x magnification).....	99.95
—	TESSINA Magnifier (8x magnification).....	49.95
—	TESSINA Tripod plate with neck chain.....	19.95
—	TESSINA Flashgun, case (requires M504 15 Volt Mallory battery).....	29.95
—	6 AG-1B Bulbs.....	1.95
—	TESSINA Flash bracket.....	9.95
—	TESSINA Filters: yellow green red (specify).....each	11.95
—	TESSINA Wrist strap.....	14.95
—	TESSINA Glass mounts, 2"x2" for standard 35mm projectors/Box of 20....	5.95
—	TESSINA Cardboard mounts, 1.2"x1.2" for 110 projectors/Box of 100....	7.95
—	TESSINA Film trimmer for TESSINA mounts.....	39.95
—	TESSINA 7 Watt spare lamp for film trimmer.....	3.95
—	TESSINA KODAK Panatomic-X Black & White film, ASA 32 (24 exposures)...	3.95
—	TESSINA KODAK Plus-X Black & White film, ASA 125 (24 exposures).....	3.95
—	TESSINA KODAK Tri-X Black & White film, ASA 400 (24 exposures).....	3.95
—	TESSINA KODAK Ektachrome X daylight Color slide film, ASA 64 (20 exp.)	4.95
—	TESSINA Daylight selfloader for cassettes.....	19.95
—	TESSINA Cassette with can.....	2.95
—	TESSINA Instruction Book.....	3.00

TESSINA 35mm film can be processed anywhere
Special TESSINA 35mm film Processing Labs:
Stewart Color Laboratories, 563 Eleventh Ave., New York, NY 10036
Berkey K & L, 222 East 44th Street, New York, NY 10017
ASAP Photo Lab, 40 East 49th Street, New York, NY 10017
Vazis Camera (Black & White only), 7167 Manchester, Maplewood, MO 61343
Northwest Custom Film, 4600 Union Bay N.E., Seattle, WA 98105

SUBTOTAL: \$ _____
NY City and State Sales Tax (NY State only) \$ _____
Handling, Transportation, Insurance \$ _____
(Min. \$ 3.00, more for heavier items, air
shipments, shipments outside US, etc.)
TOTAL: \$ _____

TP/2D/5C/35

A TECHNICAL MIRACLE OF SWISS CHRONOMETER PRECISION, CARRIED AS CONVENIENTLY AS A WALLET, LIPSTICK
OR PACK OF CIGARETTES, SMALLER THAN ANY 16MM CAMERA, ALWAYS READY TO SHOOT - ANYTIME, ANYWHERE

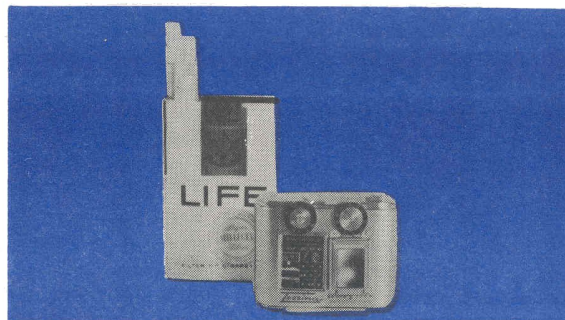
MORE

THE INIMITABLE

Tessina® 35

WORLD'S SMALLEST, LIGHTEST 35mm CAMERA

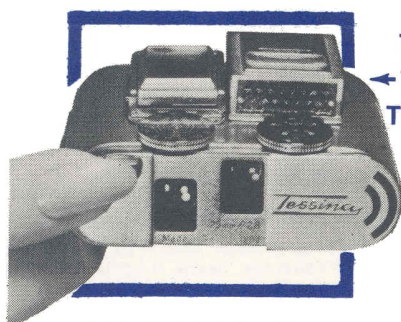
A technical miracle of Swiss Chronometer precision, carried as conveniently as a wallet, watch, lipstick, or pack of cigarettes, always ready to shoot—anytime, anywhere.



T1

OCT. 1, 1968

1. Custom-built with Swiss chronometer precision, literally to your order, as only the famous watch-makers of Switzerland can do it.
2. Lighter than a wallet (5½ ounces), smaller than a pack of cigarettes (2½" x 2" x 1"), even smaller than any 16mm subminiature camera.
3. Both a subminiature AND a 35mm camera, of ultra versatility, with all desirable features.
4. Uses any standard 35mm film, color or black and white, prepackaged or self-loaded.
5. Large size 14 x 21mm negatives, 2 to 3 times bigger than those taken with other subminiature cameras.
6. Film length is more economical, renders 2½ to 3 times as many pictures as standard 35mm cameras.
7. Pressing the button takes the pictures, counts the exposures, cocks the shutter, transports the film, readying the TESSINA 35 instantaneously for the next shot.
8. Swiss precision miniature motor provides 6-10 automatic one-by-one shots without rewinding, ideal for rapid action photography.
9. TESSINA 35 L with cross-coupled exposure meter provides accurate light reading, automatically or manually.
10. Twin-lens reflex system offers parallax-corrected lenses for viewing and picture taking.
11. TESSINON 25mm f/2.8 (53° angle) renders critical sharpness, authentic tonal values and contrast, precise color fidelity.
12. Through-the-lens viewing with ground glass for accurate framing, focusing and depth-of-field control.
13. Continuous focusing range from infinity down to 9", for ultra close-ups.
14. Choice of reflex and sports-finder — for waist level, eye level and 90° angle shots — field lens, 8x magnifier or 6x prism finder.
15. Choice of lens stops from f/2.8 to f/22.
16. Swiss precision movement with electronically tested shutter speeds and equidistant click stops, from ½-1/500th second plus B.
17. Choice of X or M synchronizations, attachable TESSINA miniature flashgun.
18. Choice of haze, yellow, green, red or 85 type A filters.
19. Choice of any finisher who processes 35mm film, any 35mm developing tank.
20. Uses any 35mm enlarger for larger-than-life-size blow-ups, up to 16" x 20" and beyond.
21. Uses any 35mm projector to show your slides, with cardboard or Newton ring-free glass mounts.
22. 17 jewel watch attaches easily to accessory clip of TESSINA 35.
23. Choice of chrome, black, red or gold finish, with detachable brief instruction guide.
24. You carry TESSINA 35 conveniently with you all year — in coat, hip or shirt pocket, on your belt, wrist or around your neck, in your purse, folio, etc.
25. The inconspicuous TESSINA 35 is always ready for instant use, ideally suited for taking candid pictures, — any time, anywhere.
26. Jewelled mechanism with ruby stones as used in fine Swiss watches eliminates friction and wear, guarantees smooth operation.
27. Swiss precision mechanism is geared for more than 50,000 operations.
28. Solid, virtually shock-proof construction withstands the most rugged use, for lifelong durability.
29. Built to the most rigid precision standards, every TESSINA 35 passes the most scrupulous, total quality controls, certified by an inspection label.
30. World wide guarantee for highest mechanical and optical performance.



TESSINA 35
← TESSINA 35 L
TESSINA KIT #1
(in display box):



TESSINA KIT #2
← (in display box):

DIFFERENT COLOR FINISH

Tessina® 35

w/Tessinon 25mm f/2.8, in chrome finish	
Same, with cross-coupled exposure meter	
1 TESSINA 35 in chrome finish, 1 Leather Case, 1 TESSINA Flashgun with Leather Case, 6 AG-1 Bulbs, 4 Black-and-white films: ADOX ASA 20 (1 each) ADOX ASA 40 ADOX ASA 100 KODAK Tri-X on Estar base ASA 400 3 Color films: KODAK Kodachrome II ASA 25 (1 each) KODAK High Speed Ektachrome ASA 160 KODAK Ektacolor S ASA 100 Same with TESSINA 35 Ladd	
Same as KIT #1 PLUS:	
1 Magnifier 8x	
1 Tripod Plate w/neck chain	
Same with prismfinder 6x instead of magnifier 8x add	
Same with TESSINA 35 Ladd	
Red finish	
Gold finish	
Black finish	

PRICE

149.50	
169.50	
174.50	
(\$ 4.73 SAVINGS)	
20.00	
199.50	
(\$ 6.63 SAVINGS)	
20.00	
20.00	
10.00	
10.00	
10.00	

TINIEST CAMERA FOR BIGGER THAN LIFESIZE PICTURES.

All prices are f.o.b. New York, subject to change without notice. Distributed exclusively through franchised TESSINA dealers.

Tessina® ACCESSORIES



CASES

1. Compact, hard cover leather case 7.95
De luxe blue or green and gold zipper case 7.95
Soft leather zip case, w/hand strap 7.95

INTER-CHANGEABLE FINDERS

1. Prismfinder (6X magnification) 39.95
2. Magnifier (8X magnification) 19.95
3. Field lens 5.95
Plain sports finder, attaches to TESSINA 35 4.95
Reflex and sports-finder (spare part) 9.95

WATCH, FILTERS

1. 17 Jewel Swiss precision watch. attaches to TESSINA 35 29.95
Complete filter set (haze, yellow, green, red, 85) 19.95
One filter only (please give tint) 3.95
Type 85 conversion filter 4.95

FLASHGUN

2. TESSINA flashgun w/2" short cord, leather case 9.95
(requires M 504 15V Mallory battery) 9.95
Same w/standard cord 9.95

TRIPODS ETC.

3. Tripod plate with neck chain 6.95
4. Wrist strap 5.95
Bracket attachable to tripod plate 3.95
5. Compact table clamp and tripod 14.95
SUPORPHOT Combination table-tripod, close-up and copy stand 39.95
METRAPHOT exposure meter, attaches to TESSINA 35 23.95
Case for METRAPHOT 2.95
Same, w/supersensitive element, cases 35.95
Supersensitive element including case only 9.95

METER

SLIDEMOUNTS

- TESSINA mounts w/NEWLO glass Box of 25 3.45
Rapid fastener for TESSINA mounts 2.95
TESSINA cardboard mounts Box of 100 3.95
TESSINA cardboard mounts Box of 2095
Film trimmer for TESSINA mounts 16.50
7 Watt spare bulb for trimmer95

RELEASES

- PNEUMA-GITZO air remote release w/ 16,5' cable .. 9.95
ELECTRO-GITZO electric remote release w/ 15' cable .. 39.95
100 ft. extension for ELECTRO-GITZO 5.95
6" cable release with set screw 2.95

BLACK AND WHITE FILMS

1. ADOX ASA 20: 24 exposures 1.25
ADOX ASA 40: 24 exposures 1.25
ADOX ASA 100: 24 exposures 1.25
KODAK Tri-X on Estar base ASA 400: 24 exposures 1.45

COLOR FILMS

2. KODAK Kodachrome II daylight ASA 25: 18 Exposures 1.95
KODAK High Speed Ektachrome daylight ASA 160: 18 exposures 1.95
KODAK Ektacolor S negative ASA 100: 18 exposures .. 1.95

SELFLOADER CASSETTES BOOKLETS

3. Daylight selfloader for TESSINA cassettes 9.95
4. TESSINA cassette with can95
TESSINA 2-color leaflet no charge
TESSINA 2-Color test reports from Magazines no charge

PHOTOFINISHERS WHO PROCESS, MOUNT, AND ENLARGE 35mm FILM TAKEN WITH THE TESSINA CAMERA:

Perfect Photo, TESSINA Dept., 1810 W. Pico, Los Angeles, CA. 90006
San Bruno Camera Co., TESSINA Dept., 505 San Mateo Ave., San Bruno, CA. 94066
Microfilm Systems TESSINA Dept., 716B N. Weber, Colorado Springs, CO. 80902
Continental Processing Lab., TESSINA Dept., 633 NE 125th N. Miami, FL 33161
Perfect Photo, TESSINA Dept., 2717 N. Lehaann Ct., Chicago, Ill. 60606
Fulltone Foto Co., TESSINA Dept., 1404 S. Shelby St., Louisville, KY 40217

Barber Photographic Co., TESSINA Dept., 378 Sixth Ave., Newark, N.J. 07107
Vazis Camera, TESSINA Dept., 7167 Manchester, Maplewood, Mo. 63143
Berkey Photo, TESSINA Dept., 77 E. 13th St., New York, N.Y. 10003
Modernage, TESSINA Dept., 6 West 48th St., New York, N.Y. 10036 (B & W Only)
Perfect Photo, TESSINA Dept., 4747 N. Broad St., Phila., Pa. 19141
Northwest Custom, TESSINA Dept., Univ. Sta., Box 16, Seattle, WA. 98105

KODAK, ANSCO, AGFA etc. process 35mm film taken with the TESSINA. They do not mount TESSINA slides.

IDEAL FOR: INDUSTRY, SCIENCE INVESTIGATION, ARMED FORCES, COPY WORK, MICRO — FILMING
... ANY BUSINESS APPLICATION. TRAVEL, SPORTS, FAMILY PICTURES, PORTRAITURE,
CLOSE-UPS, CANDID SHOTS ... ANY PERSONAL PLEASURE



Tessina 35 THE ONLY SUBMINIATURE THAT REALLY MAKES SENSE!

979 THIRD AVENUE, NEW YORK, NY 10022 • (212) 421-5220

TC/10MC/69

EUROPEAN PRECISION EQUIPMENT

ALPA • TESSINA • ROBOT • CARENA • KINOPTIK • GITZO
VOLOMAT • LINDIA • KERN • OMAG • OMEGA ELECTRONIC • FI-CORD

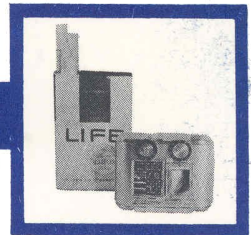


979 THIRD AVENUE, NEW YORK, N. Y. 10022 • (212) HA 1-5220

Tessina 35

World's Smallest,
Lightest 35mm Camera

April 15, 1969



Dear TESSINA photographer,

We are now ready to accept TESSINA 35 cameras for conversion into the new and exciting TESSINA 35L with cross-coupled exposure meter

Unless you already own the TESSINA 35L, please contact your local TESSINA dealer to have your camera shipped to our New York office, for conversion.

The charges including the new 35L exposure meter are \$ 30.-- plus postage (and New York City and State taxes, where applicable). If you use your TESSINA every day, please request our 2 day return service. The usual time required is 1-2 weeks.

The TESSINA 35 is still and by far world's smallest and lightest 35mm camera with dimensions of only 2 1/2 x 2 x 1" and weighing but 5 1/2 ounces. Any standard 35mm processing, enlarging and projection equipment can be used with the TESSINA which simplifies its handling and reduces its cost even more.

Our multi-color brochure and reprint of recent test reports are enclosed.

The enclosed pricelist shows you all TESSINA accessories and especially the choice of 7 different, prepacked TESSINA films:

Black-and-white: 20 ASA / 40 ASA / 100 ASA / Kodak Tri-X 400 ASA

Color: Kodak Kodachrome II Daylight 25 ASA / High Speed

Ektachrome Daylight , 160 ASA / Ektacolor S

Negative 100 ASA

In addition you can load your own TESSINA cassettes with the daylight selfloader.

Your local TESSINA dealer, as well as our New York office will be happy to answer any questions you may have.

We wish you continued pleasure and success with your TESSINA photography.

Very truly yours,

KARL HEITZ, INC.

Yvonne Brandes

Yvonne Brandes

Vice-President and Sales Director

PS: Should you be interested in some of our other European precision equipment, please use the enclosed reply card.

EUROPEAN PRECISION EQUIPMENT

ALPA • TESSINA • ROBOT • CARENA • KINOPTIK • PRIMOS • VOLOMAT • LINDIA • KERN • OMAG • FI-CORD • ASTROLUX

SEP. 26 1985

FOR ADDITIONAL INFORMATION, TEST EQUIPMENT, GLOSSY PRINTS, ETC. PLEASE CONTACT



35
YEARS

EUROPEAN PRECISION EQUIPMENT

MAIL: POB 427 • SHIP: 34-11 62ND STREET
WOODSIDE, NY, 11377 • (718) 565-0004

GITZO: FULL LIFETIME WARRANTY
OTHER EQUIPMENT: FULL 5 YEAR WARRANTY

TESSINA FILMS

Received

September 23, 1985

SEP 23 P.M.

SEP. 26 1985

P. Sanford
Howell, MI

Mr. Phil Sanford
5733 Richardson Road
Route No. 3
Howell, MI 48843

Dear Mr. Sanford:

Thank you for your letter of Sept. 16th.

The only color film we have available prepackaged at the present time is EKTACHROME X Daylight Color Slide Film.

The TESSINA uses any Standard 35mm film, color or black and white prepackaged or self-loaded.

In loading your own cassettes with film in the daylight selfloader, the length of the films are as follows:

Thin Black and White films- 11 winding- 17½" inch of film for 24 pictures.

Color Film and thick Black & White film- 9½ Windings- 15" inches of the film for 18 pictures.

Please write or call for any additional information.

We will be glad to give you prompt and personal assistance.

Sincerely yours,
KARL HEITZ, INC.

Dominic Martucci

DOMINIC MARTUCCI
Service Manager

DM/ra

SEP. 7 1985



35
YEARS

Tessina 35

25
YEARS

MAIL: POB 427 • SHIP: 34-11 62ND STREET
WOODSIDE, N.Y. 11377 • (718) 565-0004

WORLD'S SMALLEST, LIGHTEST 35MM CAMERA
FULL 5 YEAR WARRANTY

Received
SEP 7 P.M.
P. Sanford
Howell, N.J.

20 EXCLUSIVE REASONS WHY TO OWN A TESSINA

- 1) A masterpiece of Swiss chronometer precision, literally custom-built for you, as only the watchmakers of Switzerland can do it.
- 2) Both a subminiature AND a 35mm camera, yet lighter than a wallet (5 oz.), smaller than a pack of cigarettes and any 16mm subminiature (5 1/2" x 2" x 1").
- 3) Uses any standard 35mm film, color or black and white, prepackaged or self-loaded, 35mm processing, 35mm enlargers, 35mm as well as 110 projectors.
- 4) Large size 14 x 21mm frames, 2 to 4 times bigger than those from other subminiatures, can be enlarged to bigger than life size pictures, up to 16" x 20" and beyond.
- 5) Film use is more economical, renders 2 1/2 - 3x as many shots as standard 35mm cameras.
- 6) Pressing the button takes the pictures, counts the exposures, cocks the shutter, transports the film, readying the TESSINA instantly for the next shot.
- 7) Swiss precision miniature motor provides 6 - 10 automatic shots, without any rewinding.
- 8) Optional exposure meter cross-couples to f/stop dial, for accurate light readings.
- 9) Twin-lens reflex system offers parallax-corrected lenses for viewing and picture taking.
- 10) TESSINON 25mm f/2.8 (53° angle) stops down to f/22, renders critical sharpness, optimal brilliance, acute contrasts, authentic tonal values, and precise color fidelity.
- 11) Through-the-lens ground glass viewing for accurate framing and depth-of-field, with continuous focusing range from infinity down to 9", for ultra close-ups.
- 12) Choice of waist and eyelevel finder, 8x magnifier or 6x prism finder.
- 13) Swiss precision movement with electronically tested shutter speeds and equidistant click stops from 1/2 - 1/500th second, B, X or M synchronization, plus miniature flashgun.
- 14) Choice of yellow, green, red filters
- 15) You can carry your TESSINA conveniently with you all year - in your coat, hip or shirt pocket, on your belt, wrist, around your neck, in your purse, folio, etc.
- 16) Choice of chrome, black, red or gold finish, plus noise-free or noise reduced models (with nylon gears), ideally suited for taking candid pictures - anytime, anywhere.
- 17) Swiss precision mechanism with ruby stones, as used in fine Swiss watches, eliminates friction and wear, for smooth operation, is geared for more than 100,000 pictures.
- 18) Uncompromisingly solid, virtually indestructible construction, built to the most rigid Swiss precision standards, withstands the most rugged use for lifelong durability.
- 19) Every TESSINA passes the most scrupulous, 100% quality controls.
- 20) TESSINA Cameras are covered by the Full 5 Year TESSINA Warranty Buyer Protection.

IDEAL FOR INDUSTRY, SCIENCE, INVESTIGATION, ARMED FORCES, COPY WORK - ANY BUSINESS PICTURES
TRAVEL, SPORTS, FAMILY, PORTRAITS, CLOSEUPS, CANDID SHOTS - ANY PERSONAL PLEASURE
TL/2C/35



HEITZ SERVICE 53 Years 34-11 62nd Street, Woodside, NY 11377 Tel(718)565-0004
Corp. Fax(718)565-2582 E-mail: karlheitz@compuserve.com Web: karlheitz.com

WORLDWIDE SALES AND SERVICE CENTER FOR ALPA 35, TESSINA, ROBOT, KINOPTIK
INGENIOUS DESIGN EXCLUSIVE FEATURES - TOP QUALITY - LIFELONG DURABILITY- EXTRALONG WARRANTY

October 17, 2001

NEW TESSINA L World's Smallest and Lightest 35mm Cameras

Dear Future Tessina Photographer,

Exceptionally - Once Every Few Years Only - the factory is manufacturing a Limited Series of
NEW TESSINA L Swiss All-Metal Cameras, consisting of more than 200 Precision Parts

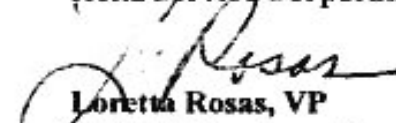
- **PRICE: \$ 1799.00 SPECIAL NET: \$ 1440.00**
- **TESSINA Kit and Accessories 20% Discount - See enclosed Pricelist**
- **UNIQUE TESSINA WARRANTY FOR LIFE + REINCARNATIONS!**
- **BY FAR THE BEST RECOMMENDATION IS THE UNSOLICITED PUBLICITY BY THOUSANDS OF HAPPY TESSINA OWNERS AROUND THE WORLD - See TESSINA Feature List on Reverse Side.**
- **THE LIMITED NEW TESSINA L SERIES IS RAPIDLY SELLING OUT**
- **FIRST COME - FIRST SERVED**

MAY WE THEREFORE RECOMMEND THAT YOU TAKE IMMEDIATE ADVANTAGE OF THIS EXCEPTIONAL OPPORTUNITY.

Please let us hear from you. Thank you very much.

We hope to welcome you soon as a happy Tessina Photographer.

Sincerely yours,
Heitz Service Corporation


Loretta Rosas, VP
Heart of Customer Service

Please call, fax, e-mail, write for Histories, Feature Lists, Literature, Special Prices on:
__ALPA__ROBOT__KINOPTIK__LINDIA Cameras, Lenses and Accessories

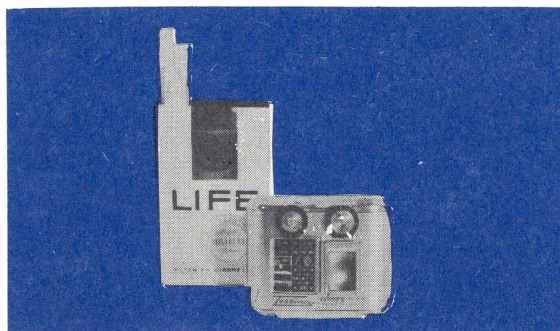
MORE

THE INIMITABLE

Tessina® 35

WORLD'S SMALLEST, LIGHTEST 35mm CAMERA

A technical miracle of Swiss Chronometer precision, carried as conveniently as a wallet, watch, lipstick, or pack of cigarettes, always ready to shoot—anytime, anywhere.



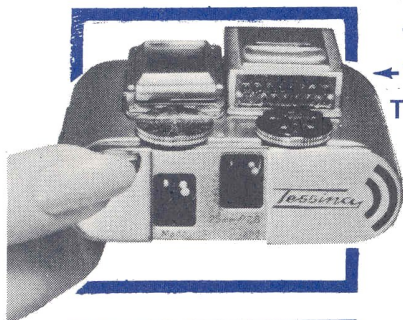
JUNE 1, 1969

EXCLUSIVE

Tessina

FEATURE LIST

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2. Lighter than a wallet (5½ ounces), smaller than a pack of cigarettes (2½" x 2" x 1"), even smaller than any 16mm subminiature camera.
3. Both a subminiature AND a 35mm camera, of ultra versatility, with all desirable features.
4. Uses any standard 35mm film, color or black and white, prepackaged or self-loaded.
5. Large size 14 x 21mm pictures, 2 to 3 times bigger than those taken with other subminiature cameras.
6. Film length is more economical, renders 2½ to 3 times as many pictures as standard 35mm cameras.
7. Pressing the button takes the pictures, counts the exposures, cocks the shutter, transports the film, readying the TESSINA 35 instantaneously for the next shot.
8. Swiss precision miniature motor provides 6-10 automatic one-by-one shots without rewinding, ideal for rapid action photography.
9. TESSINA 35 L with cross-coupled exposure meter provides accurate light reading automatically or manually.
10. Twin-lens reflex system offers parallax-corrected lenses for viewing and picture taking.
11. TESSINON 25mm f/2.8 (53° angle) renders critical sharpness, authentic tonal values and contrast, precise color fidelity.
12. Through-the-lens viewing with ground glass for accurate framing, focusing and depth-of-field control.
13. Continuous focusing range from infinity down to 9", for ultra close-ups.
14. Choice of reflex and sports-finder — for waist level, eye level and 90° angle shots—field lens, 8x magnifier or 6x prism finder.
15. Choice of lens stops from f/2.8 to f/22.
16. Swiss precision movement with electronically tested shutter speeds and equidistant click stops, from ½-1/500th second plus B.
17. Choice of X or M synchronizations, attachable TESSINA miniature flashgun.
18. Choice of haze, yellow, green, red or 85 type A filters.
19. Choice of any finisher who processes 35mm film, any 35mm developing tank.
20. Uses any 35mm enlarger for larger-than-life-size blow-ups, up to 16" x 20" and beyond.
21. Uses any 35mm projector to show your slides, with cardboard or Newton ring free glass mounts.
22. 17 jewel watch attaches easily to accessory clip of TESSINA 35.
23. Choice of chrome, black, red or gold finish, with detachable brief instruction guide.
24. You carry TESSINA 35 conveniently with you all year — in coat, hip or shirt pocket, on your belt, wrist or around your neck, in your purse, folio, etc.
25. The inconspicuous TESSINA 35 is also available in noise-free models ideally suited for taking candid pictures, — any time, anywhere.
26. Jewelled mechanism with ruby stones as used in fine Swiss watches eliminates friction and wear, guarantees smooth operation.
27. Swiss precision mechanism is geared for more than 100,000 operations.
28. Solid, virtually indestructible construction withstands the most rugged use, for lifelong durability.
29. Built to the most rigid precision standards, every TESSINA 35 passes the most scrupulous, 100% quality controls, certified by an inspection label.
30. World wide guarantee for highest mechanical and optical performance.



TESSINA 35

← TESSINA 35 L

TESSINA KIT #1
(in display box):



TESSINA KIT #2
(in display box):

DIFFERENT COLOR
FINISH

Tessina 35 TINIEST CAMERA FOR BIGGER THAN LIFESIZE PICTURES.

*Special order

All prices are f.o.b New York, subject to change without notice. Distributed exclusively through franchised TESSINA dealers.

	PRICE	
w/Tessinon 25mm f/2.8, in chrome finish	149.50	
Same, with cross-coupled exposure meter	169.50	
1 TESSINA 35 in chrome finish, 1 Leather Case, 1 TESSINA Flashgun with Leather Case, 6 AG-1 Bulbs, 4 Black-and-white films:	174.50	
(1 each) ADOX ASA 20	(\$ 4.73 SAVINGS)	
..... ADOX ASA 40		
..... ADOX ASA 100		
..... KODAK Tri-X on Estar base ASA 400		
3 Color films: KODAK Kodachrome II ASA 25		
(1 each) KODAK High Speed Ektachrome ASA 160		
..... KODAK Ektacolor S ASA 100		
Same with TESSINA 35 L add	20.00	
Same as KIT #1 PLUS:	199.50	
1 Magnifier 8x	(\$ 6.63 SAVINGS)	
1 Tripod Plate w/neck chain		
Same with prismfinder 6x instead of magnifier 8x add	20.00	
Same with TESSINA 35 L add	20.00	
Red finish	10.00	
Gold finish	10.00	
Black finish	10.00	
Noiseless, without spring motor add	30.00 *	
Noise reduced, with nylon gears add	100.00 *	

NEW
NEW

Tessina® ACCESSORIES

PRICE



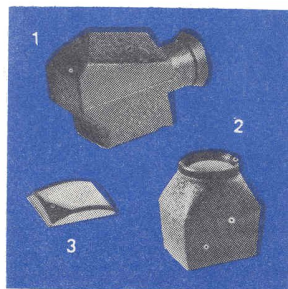
CASES

1. Compact brown leather case 7.95
- Same, in black 7.95
- De luxe blue or green and gold zipper case 7.95
- Black leather zip case, w/hand strap 7.95

INTER-CHANGEABLE FINDERS

1. Prismfinder (6X magnification) 39.95
2. Magnifier (8X magnification) 19.95
3. Field lens 5.95
- Plain sports finder, attaches to TESSINA 35 4.95
- Reflex and sports-finder (spare part) 9.95

ACCESSORIES



1. 17 Jewel Swiss precision watch, attaches to TESSINA 35 29.95
- Complete filter set (haze, yellow, green, red, 85) 19.95
- One filter only (please give tint) 3.95
- Type 85 filter 4.95
2. Tripod plate with neck chain 6.95
3. Wrist strap 5.95
4. TESSINA flashgun w/2" short cord, leather case (requires M 504 15V Mallory battery) 9.95
- Same w/standard cord 9.95
5. Compact table clamp and tripod 14.95
- Bracket attachable to tripod plate 2.95
- METRAPHOT exposure meter, attached to TESSINA 35 19.95
- Case for METRAPHOT 1.95
- Same, w/supersensitive element, cases 29.85
- Supersensitive element including case only 7.95
- TESSINA mounts w/NEWLO glass Box of 25 3.45
- Rapid fastener for TESSINA mounts 2.95
- TESSINA cardboard mounts Box of 100 3.95
- TESSINA cardboard mounts Box of 2095
- Film trimmer for TESSINA mounts 16.50
- 7 Watt spare bulb for trimmer95

NEW

NEW

NEW
NEWNEW
NEW
NEW
NEW

NEW



- PNEUMA-GITZO air remote release (16.5'), w/pouch, cable release 9.95
- 16.5' extension for PNEUMA-GITZO 2.95
- ELECTRO-GITZO electric remote release (15'), w/pouch, cable release 39.95
- Transformer for ELECTRO-GITZO 19.95
- Push-button release with 3' cord for ELECTRO-GITZO 9.95
- 6" cable release with set screw 2.95
- SUPORPHOT table-tripod for close-ups and copy work 39.95

NEW

NEW



BLACK AND WHITE FILMS

COLOR FILMS

SELFLOADER

BOOKLETS

1. ADOX ASA 20: 24 exposures 1.25
- ADOX ASA 40: 24 exposures 1.25
- ADOX ASA 100: 24 exposures 1.25
- KODAK Tri-X on Estar base ASA 400: 24 exposures 1.45
2. KODAK Kodachrome II daylight ASA 25: 18 Exposures 1.95
- KODAK High Speed Ektachrome daylight ASA 160: 18 exposures 1.95
- KODAK Ektacolor S negative ASA 100: 18 exposures 1.95
3. Daylight selfloader with 1 TESSINA cassette 6.95
4. TESSINA cassette with can95
- TESSINA 2-color leaflet no charge
- TESSINA 2-Color test reports from Popular Photography, Modern Photography, U.S. Camera, Camera 35, Government Photography no charge

PHOTOFINISHERS WHO PROCESS, MOUNT, AND ENLARGE 35mm FILM TAKEN WITH THE TESSINA CAMERA:

Perfect Photo, TESSINA Dept., 1810 W. Pico, Los Angeles, CA. 90006
 Raheb Color Corp. TESSINA Dept., 5428 Hollywood Blvd., Los Angeles, CA. 90027
 Western Subminiature Lab., TESSINA Dept., Box 48404, Los Angeles, CA. 90048
 San Bruno Camera Co., TESSINA Dept., 505 San Mateo Ave., San Bruno, CA. 94066
 Microfilm Systems TESSINA Dept., 716B N. Weber, Colorado Springs, CO. 80902
 Continental Processing Lab., TESSINA Dept., 633 NE 125th N. Miami, FL 33161
 Perfect Photo, TESSINA Dept., 2717 N. Lehaann Ct., Chicago, Ill. 60606
 Fulltone Foto Co., TESSINA Dept., 1404 S. Shelby St., Louisville, KY 40217

Knox Photo Service, Inc., TESSINA Dept., 410 Salem Street, Medford, MA. 02155
 Barber Photographic Co., TESSINA Dept., 378 Sixth Ave., Newark, N.J. 07107
 Vazis Camera, TESSINA Dept., 7167 Manchester, Maplewood, Mo. 63143
 Berkey Photo, TESSINA Dept., 77 E. 13th St., New York, N.Y. 10003
 Modernage, TESSINA Dept., 6 West 48th St., New York, N.Y. 10036 (B & W Only)
 Perfect Photo, TESSINA Dept., 4747 N. Broad St., Phila., Pa. 19141
 Northwest Custom, TESSINA Dept., Univ. Sta., Box 16, Seattle, WA. 98105

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ALPA • TESSINA • ROBOT • CARENA • KINOPTIK • CERCO • GITZO
 VOLOMAT • LINDIA • KERN • OMAG • OMEGA ELECTRONIC • FI-CORD



40
YEARS

Tessina 35

30
YEARS

MAIL: POB 427 • SHIP: 34-11 62ND STREET
WOODSIDE, N.Y. 11377 • (718) 565-0004

WORLD'S SMALLEST, LIGHTEST 35MM CAMERA
FULL WARRANTY FOR LIFE—PLUS REINCARNATIONS

TESSINA ORDER FORM: ALL PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE JANUARY 1, 1988

PLEASE PRINT COMPANY _____
OR USE NAME _____ TITLE _____
RUBBER STAMP ADDRESS _____ TELEPHONE() _____
DATE: _____ CITY _____ CITY/ZIP _____

QTY.	ITEM	PRICE
_____	TESSINA 35 camera only.....	599.95
_____	TESSINA 35 Kit (in white display box): 1 TESSINA 35 chrome, 1 Compact Leather Case, 1 Flashgun with Case, 6 AG-1B Bulbs, 1 each KODAK Panatomic-X, Plus-X and Tri-X Black & White films, Ektachrome X Color film.....	669.95
_____	TESSINA 35 in black red gold finish.....add	100.00
_____	TESSINA 35 noiseless, without spring motor, in black finish.....add	100.00
_____	TESSINA 35 noise-reduced, with nylon gears, in black finish.....add	100.00
_____	TESSINA Compact hard leather case, attachable to belt.....	39.95
_____	Same, earlier model, slightly used.....	19.95
_____	TESSINA Sports and reflex finder (spare part).....	39.95
_____	TESSINA Tripod plate with neck chain.....	29.95
_____	TESSINA Flashgun, case (requires M504 15 Volt Mallory battery).....	49.95
_____	6 AG-1B Bulbs.....	3.95
_____	TESSINA Flash bracket.....	19.95
_____	TESSINA Filters: yellow green red (specify).....each	14.95
_____	TESSINA Wrist strap.....	19.95
_____	TESSINA Glass mounts, 2"x2" for standard 35mm projectors/Box of 20.....	9.95
_____	TESSINA Cardboard mounts, 1.2" x 1.2" for 110 projectors/Box of 100.....	9.95
_____	TESSINA Film trimmer for TESSINA mounts.....	59.95
_____	TESSINA 7 Watt spare lamp for film trimmer.....	5.95
_____	TESSINA KODAK Panatomic-X Black & White film, ASA 32 (24 exposures).....	6.95
_____	TESSINA KODAK Plus-X Black & White film, ASA 125 (24 exposures).....	6.95
_____	TESSINA KODAK Tri-X Black & White film, ASA 400 (24 exposures).....	6.95
_____	TESSINA KODAK Ektachrome X daylight Color slide film, ASA 64 (20 exp.)...	9.95
_____	TESSINA Daylight selfloader for cassettes.....	29.95
_____	TESSINA Cassette with can.....	4.95
_____	TESSINA Instruction Book.....	3.00

TESSINA 35mm film can be processed anywhere.

SPECIAL LABS FOR TESSINA 35MM FILM PROCESSING AND ENLARGING

Stewart Color Laboratories, 563 Eleventh Ave., New York, NY 10036 (212)868-1440

Berkey K & L, 222 East 44th Street, New York, NY 10017 (212)661-5600

ASAP Photo Lab, 40 East 49th Street, New York, NY 10017 (212)832-1223

Vazis Camera (Black & White only), 7167 Manchester, Maplewood, MO 61343 (314)645-3436

Northwest Custom Film, 4600 Union Bay N.E., Seattle, WA 98105 (206)523-3639

_____ Stuffers _____ Reprints _____ Pricelists _____ Dealer Signs _____ Posters _____ Photographs _____ Display Tray

CASH DISCOUNT/FINDERS FEE:

4% for payment with order

SUBTOTAL: \$ _____
NY City and State Sales Tax (NY State only) \$ _____
Handling, Transportation, Insurance \$ _____
(Min. \$ 3.00, more for heavier items, air
shipments, shipments outside US, etc.)
TOTAL: \$ _____

TI

**A TECHNICAL MIRACLE OF SWISS CHRONOMETER PRECISION, CARRIED AS CONVENIENTLY AS A WALLET, LIPSTICK
OR PACK OF CIGARETTES, SMALLER THAN ANY 16MM CAMERA, ALWAYS READY TO SHOOT— ANYTIME, ANYWHERE**

20 EXCLUSIVE REASONS WHY TO OWN A TESSINA

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- 18) Uncompromisingly solid, virtually indestructible construction, built to the most rigid Swiss precision standards, withstands the most rugged use, for lifelong durability.
- 19) Every TESSINA passes the most scrupulous, 100% quality controls.
- 20) TESSINA WARRANTY BUYER PROTECTION FOR LIFE - PLUS REINCARNATIONS!



40
YEARS

Tessina 35

30
YEARS

MAIL: POB 427 • SHIP: 34-11 62ND STREET
WOODSIDE, N.Y. 11377 • (718) 565-0004

WORLD'S SMALLEST, LIGHTEST 35MM CAMERA
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- 4) Large size 14 x 21mm frames, 2 - 4 times bigger than those from other subminiatures, can be enlarged to bigger than life size pictures, up to 16" x 20" and beyond.
- 5) Film use is more economical, renders 2½-3 times as many shots as standard 35mm cameras.
- 6) Pressing the button takes the pictures, counts the exposures, cocks the shutter, transports the film, readying the TESSINA instantly for the next shot.
- 7) Swiss precision miniature motor provides 6 - 10 automatic shots, without rewinding.
- 8) Twin-lens reflex system offers parallax-corrected lenses for viewing and picture taking.
- 9) TESSINON 25mm f/2.8 (53° angle) stops down to f/22, renders critical sharpness, optimal brilliance, acute contrasts, authentic tonal values, and precise color fidelity.
- 10) Through-the-lens ground glass viewing for accurate framing and depth-of-field, with continuous focusing range from infinity down to 9", for ultra close-ups.
- 11) Choice of waist and eyelevel-finder.
- 12) Swiss precision movement with electronically tested shutter speeds and equidistant click stops from 1/2 - 1/500th second.
- 13) B, X, or M synchronization, plus miniature flashgun.
- 14) Choice of yellow, green, red filters.
- 15) You can carry your TESSINA conveniently with you all year - in your coat, hip or shirt pocket, on your belt, wrist, around your neck, in your purse, handbag, etc.
- 16) Choice of chrome, black, red or gold finish, plus noise-free or noise reduced models (with nylon gears), ideally suited for taking candid pictures - anytime, anywhere.
- 17) Swiss precision mechanism with ruby stones, as used in fine Swiss watches, eliminates friction and wear, for smooth operation, is geared for more than 100,000 pictures.
- 18) Uncompromisingly solid, virtually indestructible construction, built to the most rigid Swiss precision standards, withstands the most rugged use, for lifelong durability.
- 19) Every TESSINA passes the most scrupulous, 100% quality controls.
- 20) TESSINA WARRANTY BUYER PROTECTION FOR LIFE - PLUS REINCARNATIONS!

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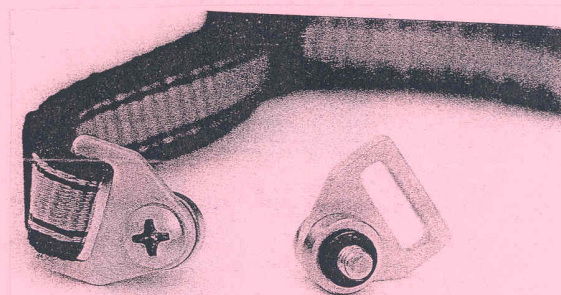
IMPORTANT NEWS TO ALL ALPA OWNERS,

September 2002

NEW LUGS TO ATTACH NECKSTRAP TO ALPA 10d, 11e, 11e1, 11si Cameras

Dear Alpatographer,

Due to the popular demands for lugs for the Alpa 10d, 11e, 11e1, 11si, we can offer you a New Specially Manufactured Design - very similar to the original Alpa Lugs - attachable with a Phillips screwdriver.



Introductory Price

Pair of New Lugs for Alpa 10d, 11e, 11e1, 11si	79.95
Handling, Insurance, Shipping in USA	5.00
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Plus Extra Long 1 Year Warranty - Used Equipment and Repairs
- ▶ Plus Competitive Prices
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Please send us defective cameras(s) and lens(es) for repair service with check or credit card authorization for \$60 in USA, \$85 outside USA - \$50.00 is for the Estimate, which is deductible from the approved Estimate plus \$10.00 or \$35.00 for return shipping.

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QTY.	ITEM	PRICE
_____	TESSINA 35 camera only.....	699.95
_____	TESSINA 35 Kit (in white display box): 1 TESSINA 35 chrome, 1 Compact Leather Case, 1 Flashgun with Case, 6 AG-1B bulbs, 1 each KCDK Panatomic-X, Plus-X and Tri-X Black & White films.....	799.95
_____	TESSINA 35 noise-reduced, with nylon gears.....	add 150.00
_____	TESSINA Compact hard leather case, attachable to belt.....	39.95
_____	TESSINA Sports and reflex finder (spare part).....	39.95
_____	TESSINA Tripod plate with neckchain.....	29.95
_____	TESSINA Flashgun, case (requires M504 15 Volt Mallory battery).....	49.95
_____	6 AG-1B Bulbs.....	3.95
_____	TESSINA Flash bracket.....	19.95
_____	TESSINA Filters: yellow _____ green _____ (specify).....	each 14.95
_____	TESSINA Wrist strap.....	19.95
_____	TESSINA Glass mounts, 2" x 2" for standard 35mm projectors/ Box of 20	9.95
_____	TESSINA Cardboard mounts, 1.2" x 1.2" for 110 projectors/ Box of 100.	9.95
_____	TESSINA KODAK Panatomic-X Black & White film, ASA 125 (24 exposures).	6.95
_____	TESSINA Plus-X Black & White film, ASA 125 (24 exposures).....	6.95
_____	TESSINA KODAK Tri-X Black & White film, ASA 400 (24 exposures).....	6.95
_____	TESSINA Daylight selfloader for cassettes.....	29.95
_____	TESSINA Cassette with can.....	4.95
_____	TESSINA Instruction Book.....	3.00

TESSINA 35mm film can be processed anywhere.

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(212) 627-0638

Microtec Industries
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San Diego, CA 92109
(619) 272-8820

Vazis Camera (Black & White only)
3521 Watson Road
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IMPORTANT: TESSINA cameras are very short in supply,
so that we cannot guarantee any firm delivery.
Thank you very much for your understanding.

SUBTOTAL: \$ _____

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Website: karlheitz.com **March 2002**

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	New	Used
TESSINA 35 Chrome Finish.....	\$ 1799.00	999.00
TESSINA 35 Gold, Red or Black Finish (specify), Very Rare.....Add	600.00	600.00
TESSINA 35 Noise-Reduced with nylon gears, Very Rare.....Add	400.00	400.00
TESSINA 35 Kit: Camera, Leather Case, Mini-Flashgun w/Case, 5 AG 1-B Bulbs, Daylight Selfloader w/Case, 4 Film Cassettes.....Add	400.00	400.00
TESSINA 35mm Chrome Dummy Camera.....	299.00	
TESSINA Coupled Exposure Meter for Tessina L, Very Rare.....	499.00	
Metraphot Exposure Meter, Very Rare.....	399.00	
Magnifier 8x Magnification, Rare.....	399.00	
Prismfinder 6x Magnification, Rare.....	399.00	
Field Lens 3x Magnification, Rare.....	99.95	
Flip-up Sports and Reflex Finder (Spare Part).....	149.95	
Hard Leather Carrying Case attaches to belt.....	99.95	69.95
Soft Zipper Case for Tessina and a few accessories.....	99.95	69.95
Tripod Plate with Neckchain.....	99.95	
Leather Wriststrap, Brown or Black (specify).....	99.95	
Attachable Mini Flashgun w/Case, 6 AG-1B Bulbs, Needs 15 Volt Battery.....	149.95	
Bracket for Tessina 35 and Mini-Flashgun, Electronic Flash, etc.....	99.95	
Glass Mounts 2" x 2" for Standard 35mm Projectors, Box of 20.....	19.95	
Cardboard Mounts 2x2" Set of 20.....	19.95	5.00
Cardboard Mounts 1.2" x 1.2" for 110 Projectors, Box of 100.....	19.95	10.00
Kodak Panatomic-X Black and White Film, ASA 32, 24 Exposures.....	29.95	
Kodak Plus-X Black and White Film, ASA 125, 24 Exposures.....	29.95	
Kodak Tri-X Black and White Film, ASA 400, 24 Exposures.....	29.95	
TESSINA Cassette with Can (Reusable).....	29.95	19.95
Daylight Selfloader w/Case: 35mm Cartridges into Tessina Cassettes.....	99.95	
Instruction Plate for Back of Camera.....	39.95	
ASA Exposure Plate for Top of Camera, English or German (specify).....	29.95	
Slide-in Shoe for Flashgun, Metraphot exposure meter, other Accessories.....	49.95	
TESSINA Red and Blue Box.....	49.95	25.00
TESSINA Lens Cleaning Brush.....	19.95	
TESSINA Kit Display Box.....	29.95	15.00
TESSINA Instruction Book (if ordered without camera).....	29.95	
TESSINA Color Brochure.....	29.95	
TESSINA History with Feature List.....	No Charge	
TESSINA Spare Parts.....	On Request	
TESSINA Parts Folder, Copy.....	39.95	
Service Estimate, deductible if approved, includes \$10.00 for return shipping.....	60.00	
VISA MC Exp. Signature		

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<u>Qty. Description</u>	<u>New</u>	<u>Used</u>
TESSINA 35 Chrome Finish.....	1799.00	999.00
TESSINA 35 Gold or Black Finish (specify), Very Rare.....Add	600.00	600.00
TESSINA 35 Noise-Reduced with nylon gears, Very Rare.....Add	400.00	400.00
TESSINA 35 Kit: Case, Mini-Flashgun w/Case, 5 AG 1-B Bulbs, Daylight Self-loader w/Case, 4 Film Cassettes w/Cans, with Display Box.....Add		400.00
TESSINA 35mm Chrome Dummy Camera.....		299.00
TESSINA Coupled Exposure Meter for Tessina 35, Very Rare.....	499.00	
Metraphot Exposure Meter, Very Rare.....	299.00	
Magnifier 8x Magnification, Very Rare.....	399.00	
Prismfinder 6x Magnification, Very Rare.....	399.00	
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Flip-up Sports and Reflex Finder (Spare Part).....	149.95	
Leather Carrying Case, attaches to belt.....	99.95	69.00
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Attachable Mini Flashgun w/Case, 5 AG1-B Bulbs, Needs 15 Volt Battery, Very Rare	149.95	
Bracket for Tessina and Mini-Flashgun, Electronic Flash, etc.....	69.95	
Glass Mounts 2" x 2" for Standard 35mm Projectors, Box of 20.....	19.95	16.00
Cardboard Mounts 2 x 2", Set of 20.....	19.95	5.00
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TESSINA Red and Blue Box, with Lens Cleaning Brush.....	49.95	25.00
TESSINA Kit Display Box.....	29.95	15.00
TESSINA Instruction Book (English, German, French (specify).....	29.95	
TESSINA Color Brochure.....	29.95	
TESSINA History with Feature List.....	No Charge	
TESSINA Spare Parts.....	On Request	
TESSINA Parts Folder, Copy.....	39.95	
Service Estimate, deductible if approved, incl. \$15.00 return shipping in USA/\$30 Outside USA	65.00/ 80.00	
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2. Both a subminiature AND a 35mm camera, yet incredibly lightweight (5 oz.), smaller than a pager and even any 16mm subminiature camera (2 1/2" x 2" x 1").
3. Uses any standard 35mm film, color or black and white, 35mm processing, 35mm enlarging with 14x21mm mask, slide mounts for any 35mm and 110 projectors.
4. Selfloader for transfer from standard 35mm cartridges into reusable Tessina cassettes - for more economical film use - renders 2 1/2 - 3 times as many shots as standard 35mm cameras.
5. 14 x 21mm frame, 2-4 times larger than those from other subminiatures, can be enlarged to bigger than Life Size Pictures, up to 16" x 20" and beyond.
6. Pressing the button takes the pictures, counts the exposures, cocks the shutter, transports the film, readying TESSINA instantly for the next shot.
7. Swiss precision miniature motor provides 6 - 10 automatic shots, without rewinding.
8. Twin-lens reflex system offers 2 coated parallax-corrected lenses for viewing and picture taking.
9. TESSINON 25mm f/2.8 (53° angle) picture taking lens stops down to f/22, renders brilliant luminosity + critical sharpness + rich, acute contrasts + precise color fidelity.
10. Through-the-lens groundglass viewing for accurate framing and depth-of-field control, with continuous focusing range from infinity down to 9", for ultra close-ups.
11. Choice of Waist and Eyelevel Sport and Reflex Finder, Prismfinder 6x, Magnifier 8x, Field Lens 3x Magnification.
12. Choice of Metraphot or Tessina Coupled Exposure Meter.
13. Swiss precision movement with electronically tested shutter speeds and equidistant click stops from 1/2 - 1/500 second, plus B, X or M synchronization.
14. You can carry your TESSINA conveniently with you all year - in your coat, hip or shirt pockets, on your belt, wrist, around your neck, in your purse, handbag, etc.
15. Choice of chrome, black, red, gold finish, plus noise reduced models with nylon gears, ideally suited for surveillance and candid pictures - anytime, anywhere.
16. Swiss precision mechanism with ruby stones, as used in fine Swiss watches, eliminates friction and wear, for smooth operation, is geared for more than 100,000 Pictures.
17. Uncompromisingly solid, indestructible all-metal construction, built to the most rigid Swiss Precision Standards, withstands the most rugged use, for Lifelong Durability.
18. Every TESSINA passes the most Scrupulous 100% Quality Controls. Service Quota is incredibly low - less than 1/10% - like for the Maytag Repairman.
19. By far the best Recommendation is the Unsolicited Publicity by Thousands of Happy Tessina Photographers Around the World - who like their Outstanding Pictures.
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DEAR PHOTOGRAPHER AND COLLECTOR,

MARCH 1, 2003

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CAMERAS, LENSES, ACCESSORIES - UP TO 30% DISCOUNTS!
✓ ALPA
✓ TESSINA
✓ ROBOT
✓ LINDIA Swiss Snap-in Slide Mounts with Newtonringfree Glass
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RECONDITION THE OUTSTANDING APPEARANCE OF YOUR ALPA TO
EXCELLENT TO MINT CONDITION! FOR \$ 300.00 ONLY.
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SELECT BLUE, GREEN, GREY OR RED COVERINGS!
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Loretta Rosas, VP

Karton-Dia-Rähmchen, selbstklebend (20 Stück)	DM 4,—
Karton-Dia-Rähmchen, selbstklebend (100 Stück)	DM 10,—
Metall-Dia-Rähmchen (25 Stück)	DM 11,50
Aufsteck-Durchsichtssucher (als Ersatz)	DM 40,—
Tageslicht-Filmumroller (als Ersatz)	DM 15,—

Satz TESSINA-Filter

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Filme:

Konfektioniert in TESSINA-Kassetten mit Schutzdose

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MORE THAN 45 YEARS OF TESSINA WORLD'S SMALLEST 35MM CAMERA

This ingenious camera gem of Swiss chronometer precision has been developed, manufactured and continuously upgraded since 1955 by a small, most efficient company in Switzerland, which has been making precision parts for the Swiss watch industry and many other Swiss and European industries since 1912.

Hand-assembled, literally custom-built from more than 200 Swiss precision parts, the unique Tessina twin lens reflex has never been matched. It is still by far the world's smallest 35mm camera, smaller than a lipstick or pager (2 1/2"x2"x1"), unbelievably lightweight (5 oz.), easy-to-carry with you all year - anywhere. You can use standard 35mm film, color or black and white, 35mm processing, 35mm enlarging, 35mm as well as 110 projectors.

The 14x21mm frame offers a 2-4 times larger negative than any subminiature camera, for bigger than Lifesize enlargements up to 16"x20" and beyond. The Tessina has a sports and reflex finder, a spring motor for 6-10 automatic shots and comes in chrome, gold, red or black finish, on request with noise-reducing nylon gears for Surveillance and Candid Observation. The 25mm f/2.8 Tessinon lens stops down to f/22, takes critically sharp pictures from infinity down to 9". Shutter speeds range from 1/2 - 1/500 second, plus B, X and M synchronization.

Accessories - some still available - include field lens 3x, prismfinder 6x, magnifier 8x, Metraphot meter, coupled Tessina meter, mini-flashgun, Swiss watch for an exclusive camera-watch combination. You can put the Tessina on a tripod, a neckchain, your wrist, in your pocket, your purse, or in a case attached to your belt. The Swiss precision mechanism with ruby stones, as used in fine watches, reduces friction and wear, for smooth operation. The uncompromisingly solid, virtually indestructible all-metal construction withstands the most rugged use, for Lifelong Durability - more than 100,000 pictures. Due to the scrupulous, 100% Quality Controls the Service Quota is incredibly low - less than 1/10% - like for the Maytag repairman.

The brilliant design of the Tessina and the 2 improved models Tessina 35 and Tessina L, has never been changed, and the camera is still being manufactured in limited quantities. Total production is estimated at 30,000, with 15,000 exported to the US (serial numbers 60,000 - 800,000). The Tessina has been used during Watergate and is still being used by CIA, FBI, IRS, Customs, Police, Detectives, etc. Many Professionals and many Amateurs keep using their Tessina, acquired 10, 20, 30, 40 years ago. And the Tessina has always been and still is - far ahead of any Competition. It also has become a very rare camera, and is an ever increasing Investment for Collectors.

For more than 45 years the Tessina has been sold in USA by the same distributor since the beginning, who offers by far the Widest Selection Worldwide of Tessina cameras, accessories, cassettes plus repair service for all models.

UNIQUE WARRANTY FOR LIFE + REINCARNATIONS! - for New TESSINAS

EXTRA LONG 1 YEAR WARRANTY - for Used TESSINAS and Repairs

By far the best recommendation is the unsolicited Publicity by Thousands of Happy Tessina Users Around the World.

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September 1970

PREISLISTE

TESSINA

— die kleinste 35 mm-Spiegelreflex-Kamera der Welt

mit eingebautem Federwerk für vollautomatischen Filmtransport bis zu 8 Aufnahmen, mit Filmrückspulung und Bildzählwerk. Voll-synchronisiert (F-M-X), Belichtungszeiten von $\frac{1}{2}$ — $\frac{1}{500}$ sec. und „B“. Negativformat 14 x 21 mm auf 35 mm Kleinbilddfilm. Aufnahmekapazität bis zu 23 Bilder.

TESSINA-AUTOMATIC 35

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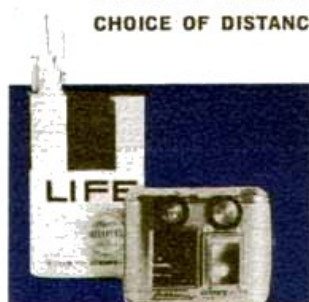
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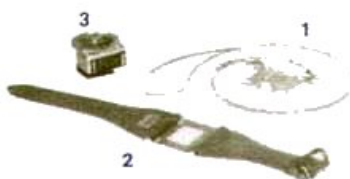
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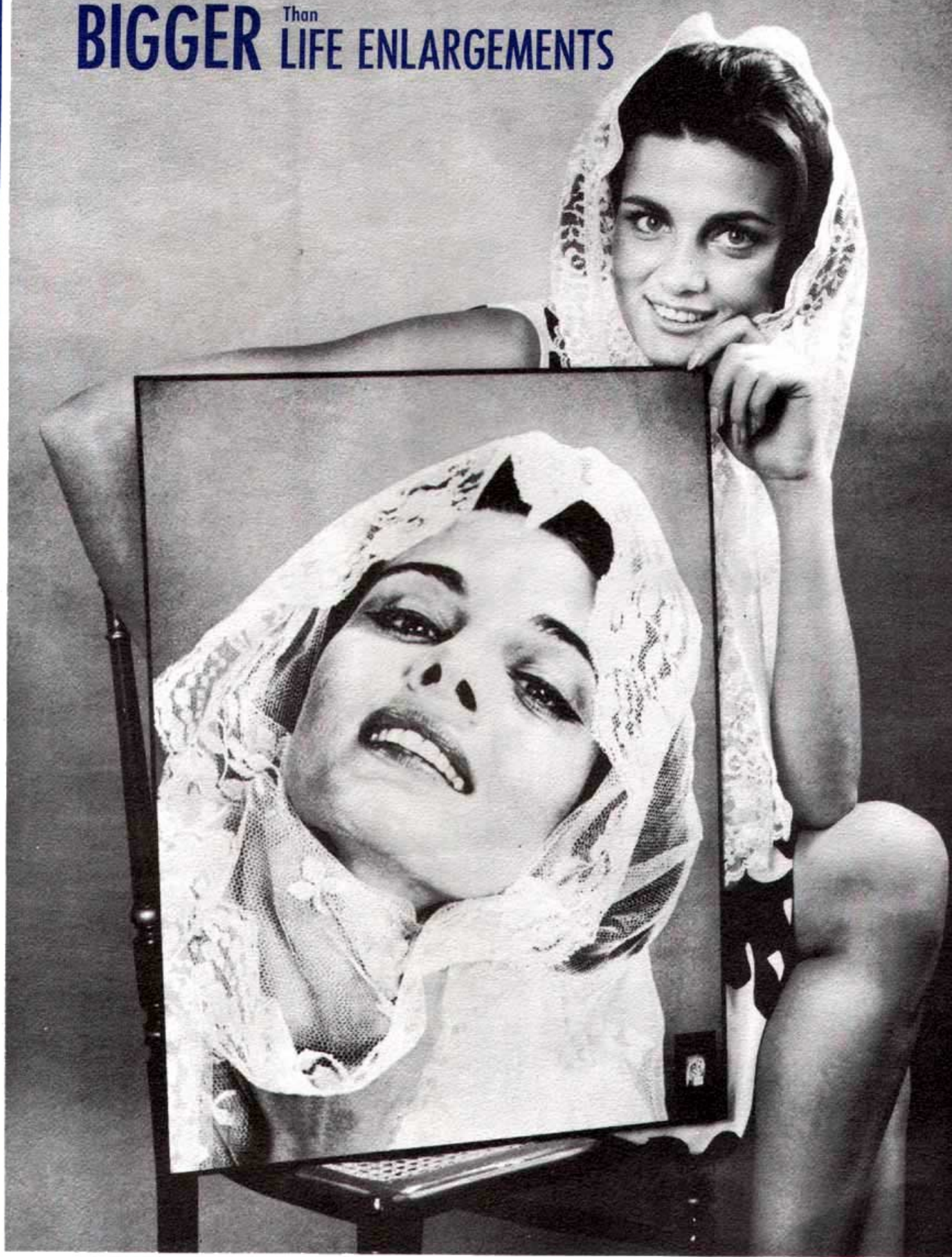


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MODERN PHOTOGRAPHY

Tessina 35L



Most ultraminiature cameras use ultraminiature film and give you an ultraminiature picture. The Tessina gives you an ultraminiature negative too (14 x 21mm, slightly more than half the 35mm format) but from a grown-up (35mm) film and does it with the same equipment the big boys use. On this box, less than half the size and weight of most 35's, you'll find two lenses (for focusing and viewing a la twin-lens reflex), a full range of adjustable f/numbers and shutter speeds, a cable release socket, a film advance-shutter cock motor, flash sync and the usual film rewind items. Then there's a flock of accessories you can add. This model 35L, the latest Tessina, comes with a coupled selenium meter as standard equipment.

It's interesting to note that this product of Switzerland also offers a wrist strap as an accessory so that it can be worn like a watch. And upon handling the camera, certain similarities between it and a watch are apparent. All dials are knurled, close to the body and wind and turn with precision and authority; the clickstopped shutter speed (11), sync (14) and frame counter (5) dials click in decisively; and the combination focusing hood-sports-finder (2, 15) and meter (16) slip into the accessory shoes on the camera top tightly but smoothly.

A further accessory—a daylight film loader—lets you roll your own film from a standard 35mm cassette into the Tessina cassette, but we prefer the factory-loaded Tessina variety. Loading

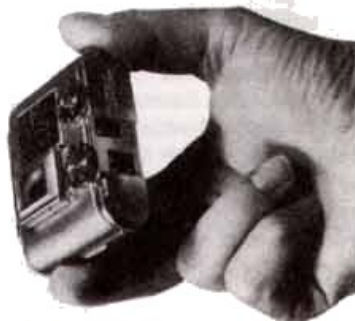
the film in the camera is standard, but on a smaller scale, of course. The only drawback here (a minor one) is that the Tessina's back is detachable. The sliding lens cover (17) must be open for the film to advance, and if it's not actually all the way open the camera won't work. This could be a nuisance, but we found it gave us an unexpectedly secure feeling. (Those tiny lenses were being protected.)

Before slipping the meter (16) in place you set the film speed (from ASA 12-800) on the underside, then set the aperture wheel (6) to f/4 so the coupling gears will mesh properly and slide the meter in place. Here you have to be a little careful not to move the meter wheel off its ASA setting. Now you can operate the Tessina in the usual match pointer control ways.

The manufacturer claims you get from five to eight shots on one winding of the motor, but, in some cases, we squeezed out a few more. The big problem with the Tessina is focusing. The manufacturer recommends setting the footage scale (4) to 10 ft. and using a small aperture (f/5.6) to take advantage of the extended depth of field of the 25mm focal length. We found we could get critical focusing by removing the hood (2) and putting a small magnifier over the finder screen. As with any TLR, the image on that screen is reversed left to right. So is the final picture. That means you must project your slides and put the negatives in the enlarger backward.

CAMERA 35

SHOOTING THE TINIEST 35



"LADIES and gentlemen, I have here the smallest 35mm camera in the world. Pick it up, look it over, slip it in your pocket. It is the ultimate in fine workmanship to reduce bulk without reducing film size. That's right, ladies and gentlemen, this little lovely uses standard 35mm film."

Our imaginary barker convinced us that you'd want to know more about the Tessina, a quality 35 smaller than a pack of cigarettes. Instead of our regular technical editors who are used to testing cameras and quickly adapt to new sizes and shapes, we decided to ask a practicing pro to give the Tessina a try. Douglas Gilbert, the young *Look* Magazine staff photographer we introduced you to in Aug./Sept. 1964 ("College Student Makes *Look*"), agreed to work with it for a while and tell us what he liked and disliked about it. After two weeks of shooting with the tiny camera in a great variety of situations, he reported back to us.

Doug was extremely pleased with the sharpness of the image. He enlarged to his customary 6x8 inch prints, but could have gone larger without losing image quality. Equally surprising and pleasant was the large image in the reflex finder. And the motor drive was a big extra for a pro shooting a fast-moving subject.

Doug was not happy with the motor whine. Using the small camera to be unobtrusive, the noise attracted attention. "As I stealthily photographed a folk singer in concert in a dim, small auditorium, the whining motor caused several

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TESSINA HISTORY:

April 2004

MORE THAN 45 YEARS OF TESSINA WORLD'S SMALLEST 35MM CAMERA - VERY RARE

This ingenious camera gem of Swiss chronometer precision has been developed, manufactured and continuously upgraded since 1957 by a small, most efficient company in Switzerland, which has been making precision parts for the Swiss watch industry and many other Swiss and European industries since 1912.

Hand-assembled, literally custom-built from more than 200 Swiss precision parts by Swiss Watchmakers, the unique Tessina twin lens reflex has never been matched and will last for Generations. It is still by far the world's smallest 35mm camera, unbelievably lightweight (5 oz.), easy-to-carry with you all year - like a watch, lipstick or cellphone (2 ½" x 2" x 1"), always ready to shoot - any time, - anywhere. You can use standard 35mm film, color or black and white, 35mm processing, 35mm enlarging, 35mm as well as 110 projectors.

The 14x21mm frame offers a 2-4 times larger negative than any subminiature camera, for bigger than Lifesize enlargements up to 16"x20" and beyond. The Tessina has a sports and reflex finder, a spring motor for 6-10 automatic shots and comes in chrome, gold, red or black finish, on request with noise-reducing nylon gears for Surveillance and Candid Observation. The 25mm f/2.8 Tessinon lens stops down to f/22, takes critically sharp pictures from infinity down to 9". Shutter speeds range from ½ - 1/500 second, plus B, X and M synchronization.

Accessories - some still available - include field lens 3x, prismfinder 6x, magnifier 8x, Metraphot meter, coupled Tessina meter, mini-flashgun, Swiss watch for an exclusive camera-watch combination. You can put the Tessina on a tripod, a neckchain, your wrist, in your pocket, your purse, or in a case attached to your belt. The Swiss precision mechanism with ruby stones, as used in fine watches, reduces friction and wear, for smooth operation. The uncompromisingly solid, virtually indestructible all-metal construction withstands the most rugged use, for Lifelong Durability - more than 100,000 pictures. Due to the scrupulous, 100% Quality Controls the Service Quota is incredibly low - less than 1/10% - like for the Maytag repairman.

The brilliant design of the Tessina and the 2 improved models Tessina 35 and Tessina L, has never been changed, and the camera is still being manufactured in limited quantities. Total production is estimated at 28,000, with 14,000 exported to the US (serial numbers 60,000 - 800,000). The Tessina has been used during Watergate and is still being used by CIA, FBI, IRS, Customs, Police, Detectives, etc. Many Professionals and many Amateurs keep using their Tessina, acquired 10, 20, 30, 40 years ago which gives them a Perfect Working Performance - For Ever! And the Tessina has always been and still is - far ahead of any Competition. It also has become a very rare camera, and is an ever increasing Excellent Investment for Collectors.

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STILL TAKING NOTES with pencil and paper? There is a better way: your own personal audio-visual system.

The Moore-Neubauer Report

Karl Heitz' Tessina 35L

The Karl Heitz people have added a "Mighty Mouse" meter to their marvel of miniaturization, the Tessina 35, and added the designation L to the camera.

The Tessina 35L looks and acts like a Tessina 35 should. It is quick and sure and takes pictures surreptitiously in all those surreptitious situations that the CIA, the FBI and others like them—and they are the ones who use the Tessina most—invariably get themselves into.

The addition of the meter should add a confidence to their picture-taking when it doesn't have to be done undercover—like off the wrist or from the belt, which are two ways the camera is often used.

THE METER is little more than an inch long and a quarter on an inch deep. It fits easily into an accessory shoe on top of the camera next to the groundglass viewing screen. For a meter its size, it is very sensitive. It has a measuring range of 100 to 6,000 lumens and an ASA sensitivity scale of 12 to 800. In our tests, which were conducted principally in a windowless office, like many of those found in the Pentagon, and with four cool white fluorescents providing overhead illumination, metered exposures were right every time.

Before slipping the meter into the accessory shoe, the ASA is set in one of two tiny windows on the underside of it. The other window is for DIN readings. ASA/DIN is set by means of a tiny knurled roller just under the light cell. The meter is coupled to the lens opening by setting it at f4 before slipping the meter into the accessory shoe. Once that's done a ball bearing mechanism comes into play to prevent the meter from being accidentally uncoupled from the lens.

Just as cameras and tape recorders can be used to produce A-V material for presentation, they also may be used to provide for information storage and retrieval (ask any microfilm salesman!).

First, let's take a look at the visual system. Nearly any camera may be used, but the convenience of subminiatures usually is a strong point for their application to this use. I usually use a Tessina 35L, with 14x21mm frame size, for

the larger film area, which resolves more detail with the high-speed films that are often necessary for this application.

A good average starting point for many presentations is f/2.8 at 1/30th on Tri-X. This produces usable results for a surprisingly wide range of conditions. Remember, you are just using this method to record data for your own use, not to produce an aesthetically or technically high quality photograph.

Miniature Marvel Adds 'Mighty Mouse' Meter

Shutter speeds that couple to the meter are shown on top of the meter—1/30, 1/125 and 1/500. The intermediary speeds of 1/60 and 1/250 are indicated by white strokes between 1/30 and 1/125 and 1/125 and 1/500. The shutter speed dial is on a side of the camera. The range is from 1/2 second to 1/500 second and B.

ONCE THE ASA speed has been determined and the lens opening set at f4 and the meter locked in place, a reading can be taken in the standard reflected manner. This is done by simply turning the diaphragm ring, which sits immediately in front of the meter, until the speed dial positions itself beneath the pointer of the exposure needle, at whichever of the five shutter speeds may be desired. The proper f stop opening will appear automatically in a small window on the diaphragm ring.

Smaller than most cigarette packs today, and able to fit easily inside an empty pack of regulars, the Tessina can get off 8 to 10 frames on one winding of a spring wind film advance knob. A roll of film for the Tessina can be cranked off with 2 or 3 windings (a roll of black-and-white has 23 frames, of color, 18).

The camera has a haze-filtered Tessinon 25 mm f2.8 lens, which we found to be fast enough to cover most light situations. It was more than fast enough while we were using Tri-X rated at ASA 400 and making copies of documents in our windowless, fluorescent-lighted office.

A SIGNIFICANT feature of the Tessina is that it uses regular 35mm film. This gives it a capability that most other subminiatures don't have. It permits the use of any 35mm film being manufactured today, from the low speedsters like Kodak's FX-Pan

all the way to its new, super-powerful 2485. Film used in the Tessina is processed as simply and conveniently as film used in any 35mm camera.

The camera requires the use of special film cassettes, but there are no problems obtaining them, and they can be easily bulkloaded.

The Tessina produces a negative 14x21mm in size, about a half-inch by 3/4 of an inch, which is approximately a third the size of a regular frame of 35mm.

Viewing is done in either of three ways—through a waistlevel groundglass, through an eyelevel sports finder, or through an accessory prism finder. In copying documents, we found that standing at an ordinary desk, and looking down, an 8½x11-inch sheet of paper fills the frame almost exactly.

The camera comes with a number of ingenious accessories, like a tripod plate which fits over the back of the



camera and a wriststrap so the camera can be worn like a wristwatch. Other accessories include a close-up and copy stand, a flashgun, bulk film loader, remote electric or pneumatic releases, and a series of filters—yellow, green, red, and infra red.

New on the GSA schedule (GS-00S-71554, Special Item No. 20-275), the Tessina 35L (and the Tessina 35) comes in chrome and black finishes. It also comes in red and gold—for lady spies?

For a rigid shooting test we turn this postage-stamp camera over to a working pro. Here's his report on two weeks with the Tessina.

uncombed heads of hair to turn and stare. My ever-thinking wife whispered loudly, 'Don't tell them you're from the FBI,' which quickly put everyone at ease again (including myself) as they laughed."

An unexpected experience for Doug as a pro was the attention the camera attracted. Until you have tested an unfamiliar-looking camera, you have no idea how many photo-hobbyists can hear the whisper of a new lens cap coming off from 100 yards away.

Some of his experiences were typical of a pro with an unfamiliar camera. While shooting at Coney Island, he forgot to wind the motor before starting to take pictures. A large hostile woman throwing sand at him for taking her picture didn't help him recall the instruction book. But this problem disappeared after he missed the first shot.

Having gotten used to longer focal lenses for his usual magazine work, Doug found that he had to move much closer than expected to fill the frame. (He recommended that all photography students be required to use the Tessina for six months. They would get used to filling the frame or have to work on negatives to pull the images out of the background.)

Since Doug uses Tri-X for his magazine work, we asked him to stick to it for a realistic test. But we didn't expect to make him work as hard as he did. He had no trouble loading Tri-X into the cassettes, emptied of the commonly used Adox-14. But he did encounter an unusual problem. The Tri-X had to be loaded into the Tessina cassettes for a couple of days before use. Apparently the degree of curl needed to fit the thicker film to the smaller diameter cassette was something the film had to learn in storage.

Doug makes a strong plea for the extra viewfinder which gives an enlarged image. Otherwise you will have trouble framing except in outdoor photography. The extra

finder slips on and off very easily and is inconspicuously stored in its own loop inside the carrying case.

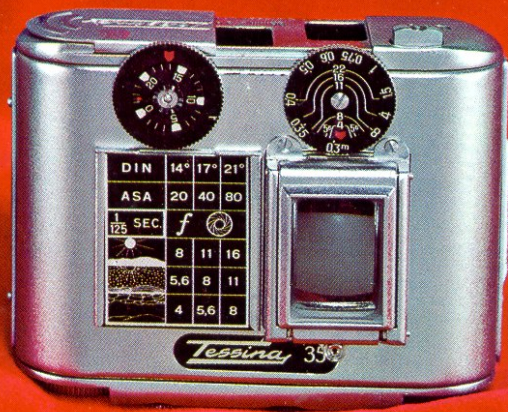
By way of summary, the Tessina came through the most difficult test with flying colors. It may not be the ideal camera for available darkness pictures. But for

the majority of pictures in black and white or color, this tiny marvel is a big performer. Whether you use your 35 for pictorials, note-taking or document copying, Tessina can compete with its bigger relatives. If camera size is a factor, Tessina is the hands-down winner.



QUALITY of blow-up from minute negative (actual size contact shown here) surprised Gilbert. With camera 18" from statue, he shot Tri-X at f/5.6 for 1/125.





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 15. Choice of chrome, black, red, gold finish, plus noise reduced models with nylon gears, ideally suited for surveillance and candid pictures - anytime, anywhere.
 16. Swiss precision mechanism with ruby stones, as used in fine Swiss watches, eliminates friction and wear, for smooth operation, is geared for more than 100,000 Pictures.
 17. Uncompromisingly solid, indestructible all-metal construction, built to the most rigid Swiss Precision Standards, withstands the most rugged use, for Lifelong Durability - giving you a Perfect Working Performance - For Ever!
 18. Every TESSINA passes the most Scrupulous 100% Quality Controls. Service Quota is incredibly low - less then 1/10% - like for the Maytag Repairman.
 19. By far the Best Recommendation is the Unsolicited Publicity by Thousands of Happy Tessina Users and Collectors Around the World - who like their Outstanding Pictures.
 20. **UNIQUE TESSINA WARRANTY FOR LIFE - PLUS REINCARNATIONS!**
 Please visit our Websites or call, fax, e-mail, write for Histories, Feature Lists, Literature, Special Prices on:
__ALPA__ TESSINA__ROBOT__KINOPTIK__LINDIA Cameras, Lenses, Accessories, + Service
Our Live (not electronic) Customer Service will be happy to give you their Prompt and Personal Assistance.

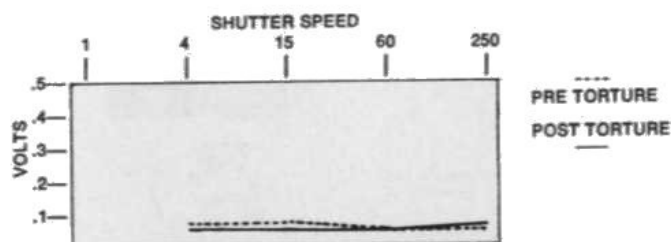
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TESSINA 45 YEARS -
IDEAL FOR INDUSTRY, SCIENCE, INVESTIGATION, ARMED FORCES, BUSINESS TRAVEL, SPORTS, FAMILY,

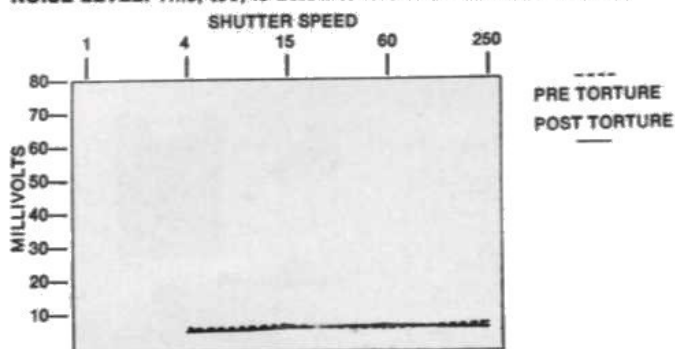
SHUTTER TRIP AND TRAVEL: The gentle release of the Tessina is especially appropriate for the low inertia of this tiny camera.

VIBRATION LEVEL: The Tessina shows less vibration than all the more conventional cameras tested, putting it in the Minox league.



Comments: There is a confidence-inspiring utilization of space without undue miniaturization of parts. Typical of the good design practices is the placement of the mainspring inside of the take-up spool. The watchmaker's touch is evident elsewhere, though—the slow-speed gear train features jeweled bearings, for instance.

NOISE LEVEL: This, too, is below level of conventional cameras.



Noise and vibration standards do not exist, but relative levels become evident when charts for several cameras are compared.

METER SPECIFICATIONS:

Type: Selenium	Zeroing provision: No
Accuracy: Within 1/4 stop	Parallax: No
ASA range: 12-800	Battery test: —
Acceptance angle: 40 degrees	
Response discrimination: Good	
Accessories: None	Scale legibility: Fair
Movement balance in various positions: Fair	

LENS PERFORMANCE: Because of the camera's design, the mirror that "folds" the image was considered to be part of the optical system, and therefore all tests performed included the mirror in the system. When off-axis tests were at first somewhat disappointing, the mirror was suspected. Sure enough, there was a smudge on it—my fault. Results with a clean mirror were very much improved. So, take care: when changing film, keep your fingers clear of the mirror chamber to assure the best possible results.

Electronic bench tests indicate that the lens has very good contrast, with the center region peaking at $f/4$. Even at the short edge of the frame (which is quite a pronounced oblong), the optimum was reached by $f/5.6$. On the long side of the oblong, where the lens must cover a field of more than 47 degrees, $f/8$ was needed to optimize performance.

The lens appears to be up to yielding good results on the small, 14x21-mm negative. Color fans should be pleased with it too, as the residual chromatic aberrations were very small.

All of this speaks well for the entire system, both lens and mirror. The latter has just as important a role as the former and too often is considered to be a non-critical component. A mirror not perfectly flat, when placed in the ray-path of a lens, can introduce aberrations (astigmatism, etc.) of which the lens itself may not be guilty.

Conclusion: Because of the small negative, the camera requires a very well corrected lens to answer the demands of greater than average enlargements. This lens can meet those demands.

MISCELLANEOUS DATA

MISCELLANEOUS DATA		PRE-TORTURE			POST-TORTURE		
Focusing System: Groundglass and Sports Finder							
Range Accuracy over range	1 ft—∞			1 ft—∞			
	∞	5M	1M	∞	5M	1M	
	OK	OK	OK	OK	OK	OK	
Shutter-trip force:		265 gm			250 gm		
Shutter-trip travel:		1-1/2-mm			1-1/2-mm		
Self-timer:	Minimum	—			—		
	Maximum	—			—		
Viewfinder: Twin-lens reflex							
Framing Accuracy		OK			OK		
Parallax Corrected		No			No		
Synchronization: Std. PC outlet							
Flashbulb		8 msec			7 msec		
Strobe		0.0 msec			0.0 msec		
Contact Resist		0.4 Ω			0.5 Ω		
Insulation		OK			OK		

STRIPDOWN REPORT

	Interior	Exterior	
Material choice:	Good	Good	Modular construction? Yes
Assembly, Finish:	Good	Good	Replace key parts easily? Yes
Repair access:	Good		Seal against dirt: Poor
Adjustment provision:	Good		
Do frequently made adjustments require major stripdown?	No		

Conclusion: A very clever design, in which every cubic centimeter has been utilized without unnecessarily complicating the various modules. However, the small size dictates fine parts, and close tolerances, so it must be kept clean —Norman Goldberg

THE INIMITABLE

Tessina 35

NEGATIVE-LY SPEAKING



AND...POSITIVE-LY SPEAKING



35 MM AND SUBMINIATURE CAMERA

...USES ANY 35 MM FILM, PROCESSED ANYWHERE

Lab report TESSINA 35L



FIELD CHECK

Camera Type:	Sub 35-mm twin-lens reflex, using 35-mm film in special 18-20 exposure cassettes.
Lens:	Tessinon 25-mm f/2.8; min. focus, 12 in. Diaphragm closes to f/22
Shutter:	Between-the-lens; 1/2 to 1/500, plus B
Viewfinder:	Groundglass plus slip-on sports finder
Flash Synchronization:	M, X
Film Transport:	Spring-wound automatic film advance and shutter cocking
Other Features:	Coupled meter (optional), cable socket
Weight:	5 1/2 oz.
Dimensions:	2 1/2x2x1 in.
Accessories:	Wrist strap, focus magnifier, tripod plate

When I was first asked to test the Tessina 35L, I didn't quite know whether to laugh it off or not. After all, what respectable pro would go out on a job with such a tiny camera? But it only took me a few rolls of film to gain a healthy respect for this precision device.

I got excellent 8x10s, using even fast films such as Kodak Tri-X, from the 14x21-mm Tessina negatives. Of course, the main secret is in the processing—fine-grain development, great care to equalize processing and washing temperatures—and a good, sharp enlarging lens. But, of course, your camera's lens must first resolve a sharp image on the film. And unless the shutter, diaphragm, and exposure meter are also functioning right on the button, no amount of critical handling in the darkroom can enable you to produce clean, sharp prints at the more than 12X magnification needed for an 8x10 print from the small Tessina negatives. The Tessina I tested was functioning with all systems "A-OK."

Because it is such a small camera, you can handle and carry the Tessina in a variety of ways. I chose a wrist strap, so that I could carry the camera around with me as if it were a watch. By wearing the Tessina just under my jacket sleeve until ready to shoot, I was able to get some interesting photos that larger, bulkier equipment would have made more difficult if not impossible. The fact that the camera was on my wrist somehow made using it seem less conspicuous than is the case with most other subminiature cameras.

If you are in the spy business, you probably already know that the camera can be focused as close as 12 inches. So far as focus is concerned, photographing papers and documents in tight areas is relatively easy. But the maximum lens aper-

Despite its smallness (or perhaps because of it, and the resulting low inertia of the camera) shooting at slower than 1/60 sec can lead to lack of sharpness. And when you've got such small negatives, sharpness is essential.

Both the coupled meter and the viewfinder hood will slip off the camera body. Taking them off makes for less bulk. Of course, without the hood, seeing through the small viewfinder groundglass becomes more difficult, and you have to be pretty good at exposure-guessing without the meter. But it's simple to make bracketed exposures because the spring-wound, automatic film advance mechanism permits fast shooting. One disadvantage here, however, is that the cassettes will hold only enough film for about 20 exposures. When you bracket-shoot, you can use up that much film quickly.

The Tessina cassettes are made of thin plastic, and I found that I had some fogging troubles at first—at least until I learned to take seriously the manufacturer's advice about loading and unloading the camera in subdued light.

I have a Tessina cartridge loader (the manufacturer calls it a daylight selfloader for bulk film, but it accepts standard 35-mm cassettes—not bulk film), so reloading into them from standard 35-mm cassettes proved to be no trouble. If you intend to get into Tessina photography, I strongly advise you to get the loader for convenience.

Do-it-yourself darkroom people will have to get used to printing the negatives from the Tessina with the emulsion facing away from the sensitized surface of their printing papers. The internal reflex mirror of the camera causes the image to land on the film laterally correct—which, compared to the standard of other cameras, is wrong side around.

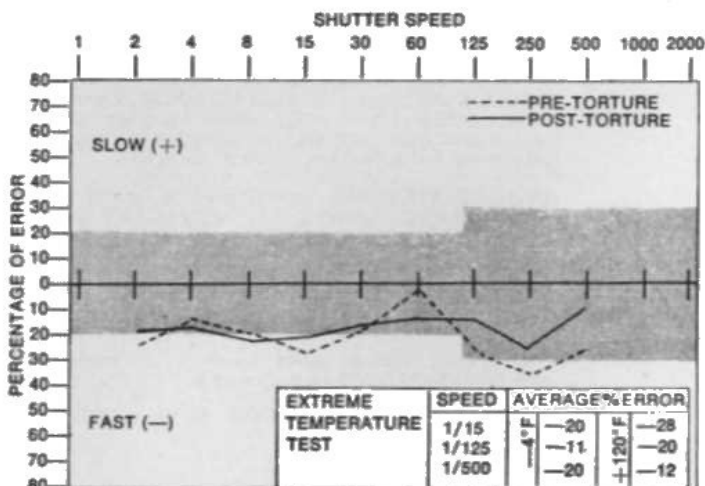
Having worked with this truly precise, tiny camera, I came away with the impression that the Tessina is potentially a serious piece of photo equipment. I would definitely choose the Tessina over the teenie-tiny format of most other subminiatures.—Harvey Zucker

INSTRUMENT READOUTS

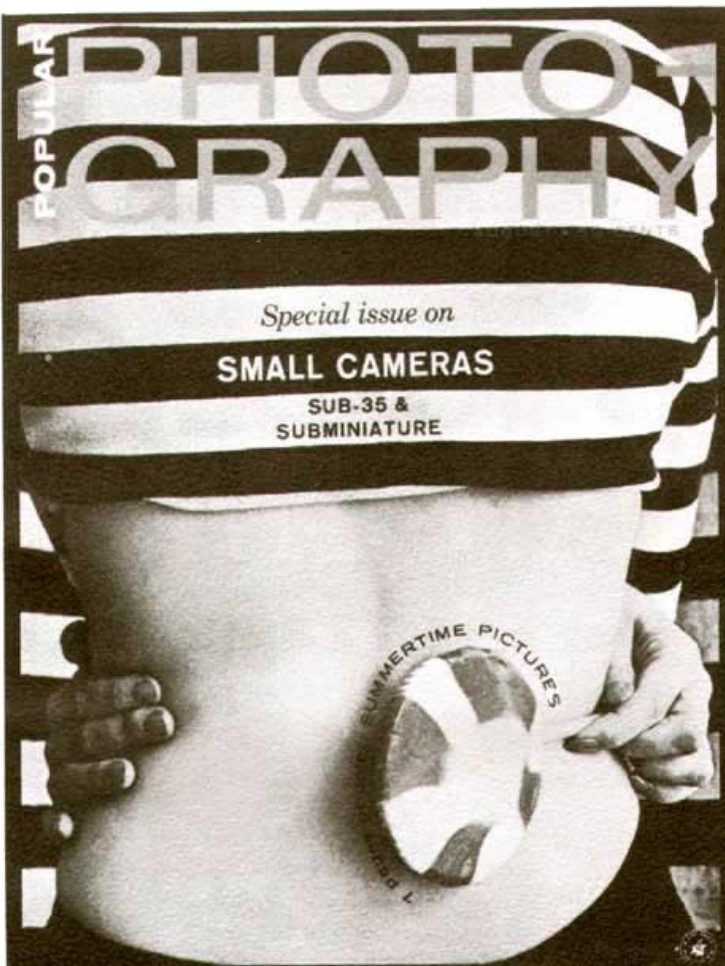
CAMERA: TESSINA 35 No. 865643

LENS: 25-mm TESSINON F/2.8

SHUTTER PERFORMANCE: Most errors are within tolerances; since all are on fast side, they can easily be adjusted for accuracy.



Suggested USA (formerly ASA) shutter accuracy standards are shown by



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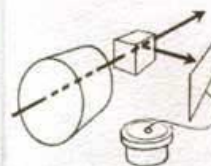
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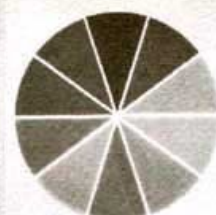


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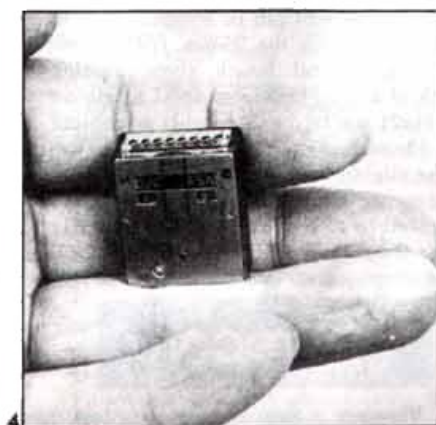
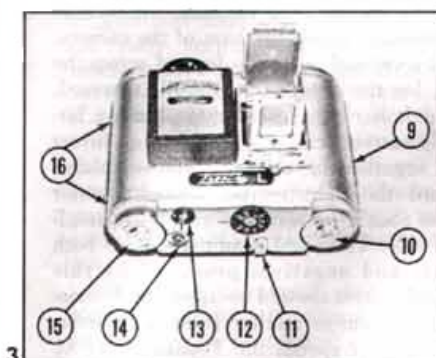
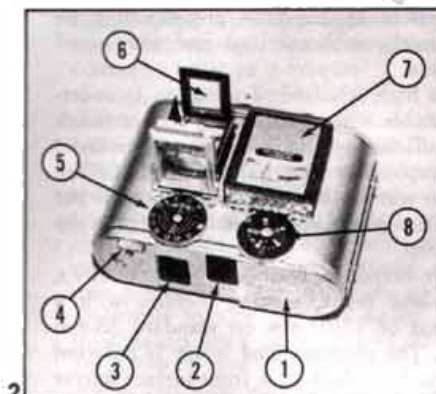
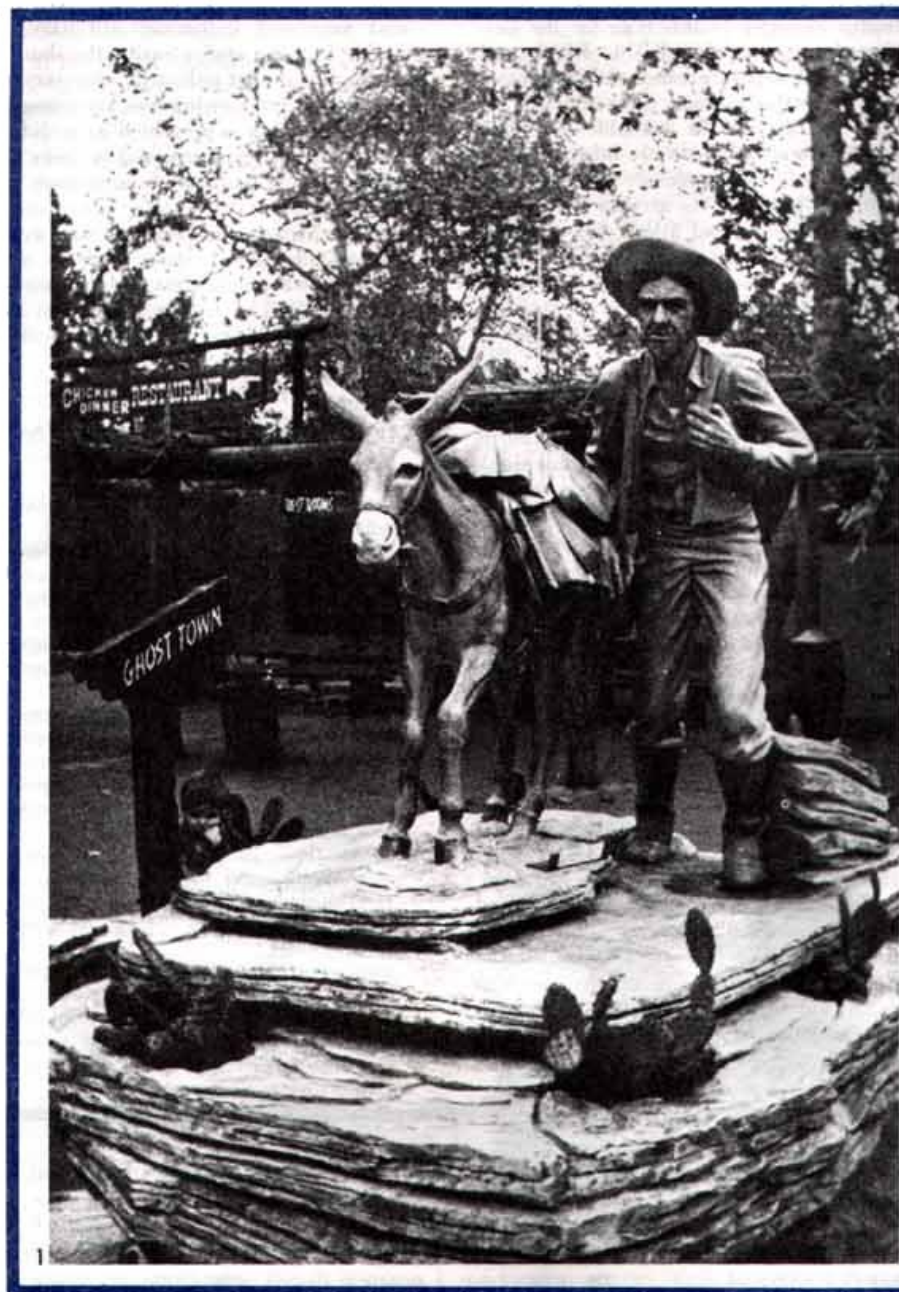
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THE EXPERTS AGREE^{ABOUT}

Tessina

WORLD'S SMALLEST **35**

The Tessina



One of the most unusual of the pocket cameras, the Tessina is manufactured in Switzerland and has long been imported to the United States by Karl Heitz Inc. of New York. A twin lens reflex, the Tessina produces the largest (14x21mm) of the pocket camera negatives. Its use of regular 35mm film loaded into special cartridges makes it not only a pocket camera but the world's smallest 35mm camera. A favorite tool of the CIA, FBI and other investigative agencies, the Tessina doesn't really

resemble the traditional camera (or other pocket cameras) in appearance and so makes a fine companion for travelers who like to take candid photos—by the time the subject has figured out that his picture is being taken, a half-dozen or more are in the camera.

CROSS-COUPLED EXPOSURE CONTROL

The Tessina is equipped with twin 25mm f/2.8 Tessinon lenses—one for viewing and one for taking the pic-

ture. Its taking lens has a built-in haze filter, can be closed down to f/22 and focuses from 12 inches to infinity. A rotary shutter provides a full range of speeds from 1/2 to 1/500 second and Bulb. The Tessina can be used as any other nonautomatic camera—that is, you determine the correct combination of lens opening and shutter speed by using a separate meter, then set the camera controls and take the picture. Or you can use the cross-coupled exposure meter, which fits into an accessory

POCKET STUDIO

This compact outfit permits you to carry a camera and important flash accessories wherever you go.

I KNEW a photographer once who always had a camera with him. You could never catch him without the briefcase that held his camera, accessories and samples of his work. He made a comfortable living as a professional news and magazine photographer. For extra profit, he did portrait and commercial work. He admitted that the secret of his success was the fact that he always had his camera with him, and everybody knew that he did.

It is good to have a camera handy at all times. The man with the always-ready camera can capture interesting scenes and occurrences that escape the occasional photographer.

I myself attempted to carry a camera at all times, but circumstances compelled me to give it up. Situations arose that prevented me from carrying my equipment-loaded gadget bag or briefcase.

When the ultra-miniature cameras appeared I bought one and kept it with me, day and night. The fly in the ointment was the poor quality of the enlarged pictures. Good as it was, for its size, my ultra-miniature was not

suitable for standard professional work.

About six months ago I was introduced to the Tessina, a Swiss-made ultra-miniature precision camera that uses 35mm film. At first I thought that it would also have the shortcomings of my former ultra-miniature. Tests, however, proved that at last I found the ideal personal camera.

With the Tessina I was able to get professional quality results in both black-and-white and color.

To be able to take pictures under most conditions, I acquired a few additional items which, with the Tessina, serve as a complete "Pocket Studio." I can carry the



THREE flash units, one on camera and two slaves, were used for girl's portrait. Equipment is easy to carry.

equipment in my pockets without making a bulge. The pocket studio consists of the following items:

- Tessina with pentaprism finder
- Metraphot exposure meter
- Emo B-C flashgun with retractable reflector
- Minox pocket tripod
- small camera clamp
- two Kodak electric eye remote flash units
- General Electric AG-1 flashbulbs

This outfit enables me to take pictures under a great variety of circumstances.

I consider my Tessina Pocket Studio to be a hobby within a profession, a hobby that enables me to take pictures of things I like, not only of those I get paid for. Of course, I can take pictures I like with my "regular" equipment, and often do, but having the tiny Tessina with me always results in additional fun and in many interesting pictures that I would have missed without it. Last but not least, having the camera handy sometimes results in additional unexpected income.

The illustrations will give you an idea of the photographic quality that can be achieved with the Tessina and the accessories carried in the pocket studio outfit.

The girl's portrait is a flash shot. One flash on camera, one Kodak slave unit on the right and the second slave unit behind the subject, to serve as a background light. Since all flash reflectors are shallow and nondirectional, the lighting is pleasingly soft.

The striking perspective of the girl on tracks results from a low camera position, combined with the great depth of field of the Tessina lens. With the 25mm lens stopped down to f/22, the depth of sharp field reaches from 21 inches to infinity.

There is no end to what you can do with a pocket studio outfit. Assemble your outfit to suit your requirements. You will find that carrying a camera at all times is a lot of fun and occasionally it can also be quite profitable.

—Joseph Foldes



OUTFIT consists of Tessina, meter, flashgun, two Kodak slave units, tripod, camera clamps, flashbulbs.

one of the most versatile of the pocket cameras. Four interchangeable finders give a choice of viewing modes: waist-level, eye-level or 90-degree angle candid shots; with reflex sportsfinder, 8X magnifier or 6X prismfinder. The latter two have individual eyepiece adjustment to provide the sharpest image possible. A compact table clamp/tripod, or combination table tripod/close-up/copy stand allows users to take full advantage of the Tessina's continuous focusing range to 12 inches; four snap-on filters add impact to outdoor photos.

The camera can be carried on a neck chain, which snaps onto the tripod plate, on a watch strap, in a soft leather zip case or hard cover leather case with a belt loop. For the fashion

conscious, the Tessina can be purchased in a choice of chrome, black, red or gold finish and there's even a 17-jewel precision Swiss watch that slips into the meter shoe, giving you the only combination pocket camera/watch in the world.

Available are a film trimmer for cutting color transparencies to fit the special Tessina glass or cardboard slide mounts and a daylight self-loader for transferring film from regular 35mm cartridges to those used with the Tessina. Pneumatic and electric remote shutter releases are also available for serious amateurs interested in specialties like nature photography, and Karl Heitz is continually expanding the list of accessories available to the Tessina owner.

SPECIFICATIONS

TESSINA 35L

LENS:	Tessinon 25mm f/2.8 in continuous focusing mount from 12 inches to infinity
SHUTTER:	Mechanical rotary type with speed range of 1/500 to 1/2 seconds; MX flash synchronization
FILM/FRAME SIZE:	Standard 35mm film in Tessina cartridges, 18 or 24 exposures 14x21mm
VIEWFINDER:	Reflex sportsfinder; 8X magnifier or 6X prismfinder optional
EXPOSURE METER:	Selenium cell cross-coupled to lens, removable
MEASURING RANGE:	ASA 12 to 800
FILM ADVANCE:	Precision miniature spring motor provides 5-8 automatic one-by-one pictures without rewinding; double exposure prevention
OTHER FEATURES:	Built-in haze filter, cable release socket, twin lens reflex viewing with ground glass for framing, focusing and depth-of-field control
SIZE/WEIGHT:	2 1/2x2x1 inches; 5 1/2 ounces

PICTURE TAKING

How you hold the Tessina to take pictures will depend upon which viewfinder you're using. When equipped with the reflex sportsfinder, or the 8X magnifier, cup the camera in your left hand place the right index finger on the shutter button with the thumb resting on the wind knob. Release the shutter by squeezing thumb and finger together slowly, as if you're trying to break the camera. While this sounds a bit on the vicious side, it isn't really; it provides the best grip for a sure, steady release of the shutter without taking a chance of camera movement.

The 6X prismfinder allows the Tessina to be used at eye-level and again, a variation of the cupped left hand to support the camera seems to be the most natural way of holding the Tessina to avoid camera movement. This position also removes the possibility of inadvertently covering the lens or changing the lens opening. When using the cross-coupled meter, take care in adjusting the lens opening dial to obtain a reading, as the dial rests in front of the meter cell and it's quite easy to end up with a misleading reading if too much of your finger gets in the way.

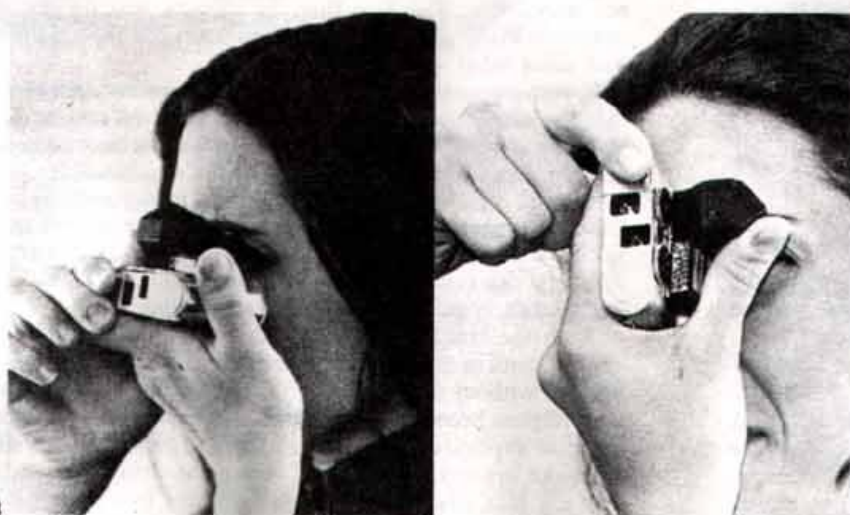
Horizontal pictures are easiest with the prismfinder. Cup your hand as if you were going to hold the camera for a waist-level shot, then turn the camera on its side with the thumb resting on the prism roof and the fingers along the camera bottom. Sighting with the left eye, press the Tessina against the nose and use the right index finger to press the shutter button. If the Emolux flash gun is in place for indoor pictures, let the gun rest on the left thumb as you won't be able to reach the prismfinder; this is equally comfortable and steady.

The Tessina is a good choice for those interested in fine craftsmanship, unusual cameras and larger negatives. By following instructions carefully, the novice can take excellent pictures without difficulty, while those who demand a great deal from their pocket camera will find that the Tessina is capable of delivering even under difficult conditions.

1. Tessina self-loader accepts standard 35mm cartridge of film for reloading into Tessina cartridges in daylight. Built-in knife blade cuts film leader when reloading is complete.

2. For waist-level viewing with the Tessina, hold camera as shown. This gives a firm grip without interfering with the lens or meter.

3. Variations of the same cupped hand position are used to hold the camera at eye level when using the prismfinder or sportsfinder for horizontal or vertical pictures.



The Tessina

Once all exposures have been made, the film must be rewound into the Tessina cartridge. This is accomplished by flicking the little arm marked R on the camera back out and upward 90 degrees to disengage the film transport system. Now pull the knurled rewind knob (marked R) out and turn in the direction of the engraved arrow until the film is rewound. As with any other camera of its type, the sudden reduction in tension when you turn the rewind knob signals that the film has separated from the take-up spool and a few more winds will finish drawing it all into the cartridge.

Everything about the Tessina operates with a clockwork feel of precision, although you may feel a bit uneasy about snapping candid shots when the film transport takes over and advances the film to the next frame. If that whirring sound bothers you, two special Tessina models designed to pacify the nervous are available—a noise-reduced Tessina using nylon gears, and a noiseless one without the spring advance motor; you must wind the film after each exposure. Personally, I enjoy the advantage of the regular spring motor and have found that there is a way to render the film advance almost inaudible in situations where you might possibly feel embarrassed by the sound of the transport mechanism in action. Hold the rewind knob tightly while shooting to prevent slack in the exposed cartridge. After taking the picture, let up on the shutter button and gradually release the tension on the rewind knob, allowing the advance to operate slowly. This cuts film advance noise to almost zero.

LOADING THE TESSINA

Tessina cartridges preloaded with a variety of film emulsions are cut, respooled and packaged by Concava Ltd., the manufacturer of the camera, and are available from most larger photographic dealers. You can also purchase empty Tessina cartridges (or save the preloaded ones for reuse after processing the film) and load your own with any 35mm film. If you send your exposed cartridges to a commercial photofinisher, tape a small piece of paper to them requesting return of the empty cartridges.

To prepare the Tessina for picture-taking, push the sliding latch positioned on the camera's right side to the rear and remove the bottom. Pull out both the wind and rewind knobs completely, then turn the camera's take-up spool toward the mirror until its black spring clip faces the film path. You'll notice two raised metal teeth, one on each side of the clip.

These must engage the film's sprocket holes to secure it to the take-up spool as the film is inserted under the spring clip.

You'll also see the traditional-type 35mm film transport wheel along the rear edge of the film path. This sprocket wheel advances the film once the bottom is replaced. Clean the camera's interior carefully, paying particular attention to the mirror. Now pull an inch or two of film from the cartridge to act as a leader and fasten it to the take-up spool, then continue pulling the cartridge back until it drops into place in the opposite chamber. Check to make sure that the sprockets on the take-up spool engage the sprocket holes and that the film is tight, with the two visible film transport sprockets engaging the film; then replace the camera bottom.

This is done by first fitting the bottom over the two pins at the left side of the camera, then gently seating it into position. Lock it by moving the sliding latch forward. You'll find it easiest to squeeze the camera top and bottom together while sliding the latch forward. Film tension is checked by pushing the rewind knob in to about 1/8-inch from the camera body and turning it gently in the direction of the engraved arrow until a slight resistance is felt. Now wind the spring motor until the wind knob stops—don't force! Push the wind and rewind knobs in completely, then set the exposure counter dial by rotating it with the nail of your index finger until its red dot is opposite the red index mark on the surrounding black ring. Press the shutter button twice to transport the first frame of film into picture-taking position and watch the rewind knob; it should turn each time you hear the spring motor advance the film. If the knob doesn't turn, it indicates that the film end was not secured to the take-up spool correctly. You'll have to repeat the entire loading procedure, which will reduce the number of pictures on that cartridge by two frames.

USING FLASH

Equipped with a standard PC flash connector, the Tessina is synchronized for use with flash bulbs at 1/30 second, or electronic flash at any shutter speed. Just to the right of the rewind knob, you'll find the PC connector and above that, a tiny black dial marked X and M. When using the camera with the Emolux flash gun supplied by Karl Heitz Inc., the dial should be revolved until the M is opposite the black line. The X position is for use only with electronic flash.

A special Tessina adapter plate on the base of the Emolux gun allows it to be used directly on the camera. Remove the meter and replace it with

the flash. Be sure to plug the short connector cord into the PC receptacle. With its tiny reflector that slides into the unit when not in use, the Emolux is an ideal choice for pocket camera use with the Tessina; it accepts AG-1B bulbs and is powered by a standard 15-volt Mallory M-504 (or equivalent) battery, which should easily last a year or more.

Other flash guns, including electronic units, can be used with the Tessina, but as the camera has no built-in tripod socket, you'll need the accessory tripod plate (\$9.95) and flash bracket (\$5.95) to accommodate your unit to the camera. To attach, the black instruction guide plate on the camera bottom must be removed. This is done by depressing the locking pin in its center and sliding the plate back toward the sliding latch. Lift the guide plate up and off the four rivets and replace with the tripod plate. Be sure its red dot coincides with the red dot on the camera bottom, then slide the tripod plate into position until the locking pin engages the center hole. The flash bracket can now be fastened to the tripod socket and your flash unit fitted into the accessory shoe on the bracket. Personally, I find the Emolux gun ideally suited for use with the Tessina, primarily because it is so compact and so easily attached for quick use.

Exposure for flash is computed the same as for the Minolta and other pocket cameras with mechanical shutters. Determine the guide number for the particular film in use and divide this number by the distance between flash and subject to find the correct lens opening, then set the lens opening dial and take the picture.

TESSINA ACCESSORIES

The Tessina system offers a wide range of accessories that makes it



one of the most versatile of the pocket cameras. Four interchangeable finders give a choice of viewing modes; waist-level, eye-level or 90-degree angle candid shots; with reflex sportsfinder, 8X magnifier or 6X prismfinder. The latter two have individual eyepiece adjustment to provide the sharpest image possible. A compact table clamp/tripod, or combination table tripod/close-up/copy stand allows users to take full advantage of the Tessina's continuous focusing range to 12 inches; four snap-on filters add impact to outdoor photos.

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Available are a film trimmer for cutting color transparencies to fit the special Tessina glass or cardboard slide mounts and a daylight self-loader for transferring film from regular 35mm cartridges to those used with the Tessina. Pneumatic and electric remote shutter releases are also available for serious amateurs interested in specialties like nature photography, and Karl Heitz is continually expanding the list of accessories available to the Tessina owner.

PICTURE TAKING

How you hold the Tessina to take pictures will depend upon which viewfinder you're using. When equipped with the reflex sportsfinder, or the 8X magnifier, cup the camera in your left hand, place the right index finger on the shutter button with the thumb resting on the wind knob. Release the shutter by squeezing thumb and finger together slowly, as if you're trying to break the camera. While this sounds a bit on the vicious side, it isn't really; it provides the best grip for a sure, steady release of the shutter without taking a chance of camera movement.

The 6X prismfinder allows the Tessina to be used at eye-level and again, a variation of the cupped left hand to support the camera seems to be the most natural way of holding the Tessina to avoid camera movement. This position also removes the possibility of inadvertently covering the lens or changing the lens opening. When using the cross-coupled meter, take care in adjusting the lens opening dial to obtain a reading, as the dial rests in front of the meter cell and it's quite easy to end up with a misleading reading if too much of your finger gets in the way.

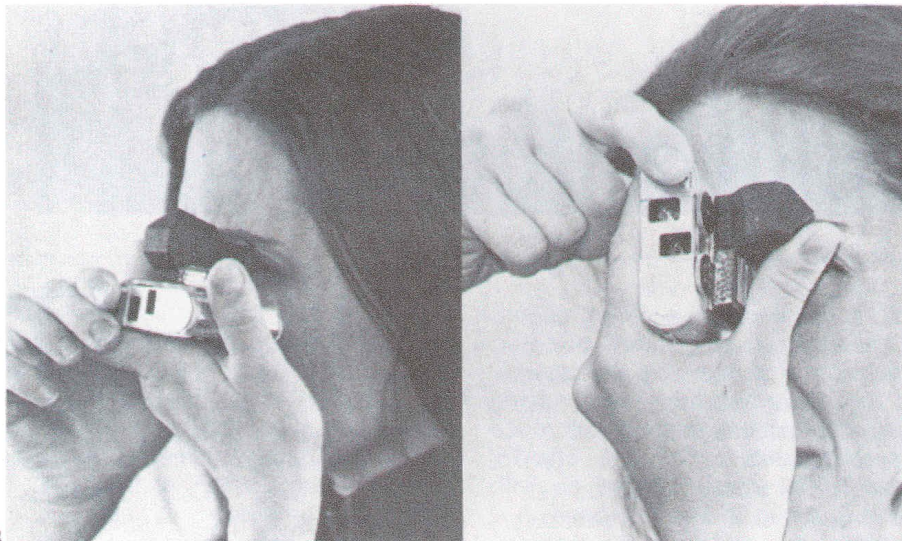
Horizontal pictures are easiest with the prismfinder. Cup your hand as if you were going to hold the camera for a waist-level shot, then turn the camera on its side with the thumb resting on the prism roof and the fingers along the camera bottom. Sighting with the left eye, press the Tessina against the nose and use the right index finger to press the shutter button. If the Emolux flash gun is in place for indoor pictures, let the gun rest on the left thumb as you won't be able to reach the prismfinder; this is equally comfortable and steady.

The Tessina is a good choice for those interested in fine craftsmanship, unusual cameras and larger negatives. By following instructions carefully, the novice can take excellent pictures without difficulty, while those who demand a great deal from their pocket camera will find that the Tessina is capable of delivering even under difficult conditions.

SPECIFICATIONS

TESSINA 35L

LENS:	Tessinon 25mm f/2.8 in continuous focusing mount from 12 inches to infinity
SHUTTER:	Mechanical rotary type with speed range of 1/500 to 1/2 seconds; MX flash synchronization
FILM/FRAME SIZE:	Standard 35mm film in Tessina cartridges, 18 or 24 exposures 14x21mm
VIEWFINDER:	Reflex sportsfinder; 8X magnifier or 6X prismfinder optional
EXPOSURE METER:	Selenium cell cross-coupled to lens, removable
MEASURING RANGE:	ASA 12 to 800
FILM ADVANCE:	Precision miniature spring motor provides 5-8 automatic one-by-one pictures without rewinding; double exposure prevention
OTHER FEATURES:	Built-in haze filter, cable release socket, twin lens reflex viewing with ground glass for framing, focusing and depth-of-field control
SIZE/WEIGHT:	2 1/2x2x1 inches; 5 1/2 ounces



1. Tessina self-loader accepts standard 35mm cartridge of film for reloading into Tessina cartridges in daylight. Built-in knife blade cuts film leader when reloading is complete.

2. For waist-level viewing with the Tessina, hold camera as shown. This gives a firm grip without interfering with the lens or meter.

3. Variations of the same cupped hand position are used to hold the camera at eye level when using the prism-

TESSINA—a unique SUB-35

Did you ever hold a camera in the palm of your hand which when clicked had a sound like a mouse's startled squeak? Or one so compact that members of our nation's security forces can hide it in hollowed cigarette packs for undercover work? Shooting with the Tessina, it becomes immediately apparent we are handling an extremely well-conceived and engineered camera.

Its high standard of precision is understandable when you realize that a watch manufacturing firm in Lugano, Switzerland is responsible for its construction. The Swiss watchmaker's discipline which is put into timepieces also becomes evident in the Tessina.

We found the Tessina to be essentially a twin-lens reflex, making pictures with a format of 14x21-mm on standard 35-mm film. The photographed image is reflected to the film plane by a front-surface mirror set at 45 degrees. This reflects the light rays downward, onto the film, which runs horizontally inside the base of the camera. Thus a vertical picture is formed across the film, but the negative is laterally reversed, i.e., left is right. In order to obtain a laterally correct print it is necessary to invert the negative in the enlarger—emulsion toward the light source. Likewise, color slides should be viewed through the emulsion side. Tests and examinations of both prints and negatives produced by this optical system showed no apparent deterioration of image quality from the mirror.

In shutter speeds the Tessina offers $\frac{1}{2}$ to 1/500 second, plus B. It has M, F, and X synch. The lens can be stopped down to f/22, which with the 25-mm f/2.8 Tessinon's short focal length gives amazing depth of field. The 25-mm focal length on the 14x21-mm format is roughly equivalent to a 43-mm lens on full-frame 35-mm. Thus it has slightly wide-angle coverage.

A spring-wound motor, which we found impossible to overwind, automatically cocks the shutter and moves the film forward. This allows you to get off from five to eight shots before rewinding. Film for the Tessina comes in special cassettes of 23 exposures for black-and-white on a 16 $\frac{1}{2}$ -inch strip of film and 18 exposures for color on a 14 $\frac{1}{2}$ -inch strip. In factory-preloaded cassettes of this type for the Tessina there are Adox KB14, KB17, and KB21, with exposure indexes of 20, 40, and 100 respectively. Soon color film of the same ratings will be available. For photographers who wish to use other types of

film there is an ingeniously designed daylight self-loader. This accepts a standard 35-mm cartridge and allows you to spool film from it into an empty Tessina cassette in daylight. A lever with an attached razor-edged protuberance quickly cuts and squares off the necessary footage once it has been cranked off.

Enlarging the negative is done just as with other 35-mm work, except it must be remembered that the negative is placed in the enlarger with the emulsion (dull side) side toward the light. Again, since you are dealing with a negative of only 14x21-mm, dust or a careless scratch becomes a more critical problem.

In mounting the color slides special cardboard slide-binding frames which fit ordinary projectors are available from the distributor. They come in boxes of 100, measure 2x2, and sell for \$3.95. Metal and glass binders are 25 for \$3.95.

We found the newest accessory viewer—the pentaprism—most practical. Working under available-light situations, or for critical focusing, the pentaprism neatly fitted the bill. It gave a large image which is upright and laterally unreversed at all times.

For quick panning with a subject, and sequence shooting, we found the sports-finder best. For fast shooting we set the distance at ten feet and stopped down to f/5.6. Varying only the shutter speeds, according to our ASA rating and light conditions, we were able to get sharp images from infinity to seven feet.

Because of the small separation between the taking and viewing lenses, parallax in the Tessina is so small that it can generally be ignored. However, at the closer working distances, 11.8 inches and closer, ignore about 15mm at the right and 10mm at the left of the subject.

The Tessina handles very well. There need never be fear that the camera is too delicate for continual shooting. Even the most ham-fisted individual will have no trouble focusing and releasing the shutter. Lens hoods are not ordinarily necessary, as both taking and viewing lenses are recessed. Accidental firing is prevented by a sliding cover plate which automatically locks the shutter until it is slid aside to uncover the lenses.

For a camera that can use any available 35-mm film, focuses down to nine inches, has a groundglass viewing screen, fantastic depth of field, weighs in at five ounces, and measures only 2 $\frac{1}{2}$ x2x1 inches, the Tessina has few competitors.



TECH DATA

FILM LOAD: Special 35-mm cassettes. Film may be spooled into empty Tessina cassettes from cartridges.

CAMERA TYPE: 35-mm motorized twin-lens reflex; sub 35-mm.

LENS: Viewing lens/taking lens: two Tessinon 25-mm f/2.8's with built-in haze filters, stopping down to f/22. Focusing: infinity to 9 inches.

SHUTTER: Rotary type. Linear speed range from $\frac{1}{2}$ to 1/500 second, plus B; M, F and X synch.

VIEWING-FOCUSING: Twin-lens reflex system with groundglass viewer. Removable self-erecting eye-level and waist-level sports-finder. Pentaprism finder (6X), waist-level magnifier (8X), and snap-on field lens available as accessories.

AUTOMATION: Built-in spring-wind motor automatically cocks the shutter and exposure counter, transports the film and re-cocks the shutter. One winding gives five to eight shots.

OTHER FEATURES: Sliding lens guard prevents accidental exposure. Cable release socket. Film counter dial. Dimensions: 2 $\frac{1}{2}$ x2x1 inches. Weight: 5 ounces. Accessory shoe takes Metaphot or other small exposure meter.

DISTRIBUTOR: Karl Heitz, Inc., 480 Lexington Ave., New York 17.

U.S. CAMERA

THE SWISS-MADE Tessina is a true ultra-miniature camera. It is tiny ($2\frac{1}{2} \times 2 \times 1$ " and light (5 oz.). Its features, however, make it outstanding and unique in that class. The Tessina is the only ultra-miniature that uses standard 35mm film, available anywhere in a variety of black-&-white and color emulsion types. From the standard cassettes the film is reloaded (in daylight) into special Tessina cartridges. The cleverly designed daylight loader is small, light and troublefree.

The Tessina cartridge holds film for 18 color or 21 black-&-white exposures. Since four Tessina cartridges can be loaded from one 36-exposure roll or film, the user gets about twice as many negatives or transparencies from each roll.

The image size is a surprisingly large 14×21 mm, which is only a fraction smaller than the regular 18×24 mm half-frame 35mm image.

At first glance it might seem hard to believe that such a tiny camera could use regular 35mm film, or that it could produce such a large image. The secret is in the use of a front-surface mirror that directs the light emerging from the lens toward the film positioned along the bottom of the camera. That way the path of light is made long enough to accommodate a lens of 25mm focal length. The largest opening of the Tessina lens is $f/2.8$ and it can be stopped down to $f/22$.

At this point a question might occur to you, as it did to me: "Will the interposition of a mirror interfere with the sharpness of the image?" It will not! Image sharpness is bordering on the fantastic. The tiny negative can be blown up to a sharp, grainless 20×24 " print. I make needle-sharp 8×10 " and 11×14 " prints from Tessina negatives as a matter of routine. Panatomic-X film developed in Microdol-X produces extremely fine grain

negatives, as long as the film is not overexposed or overdeveloped. I projected Kodachrome-X transparencies made with the Tessina to fill a 60" screen and the projected image was sharp.

In short, the Tessina can be used to make negatives and transparencies that are, for all practical purposes, equal to work done with full size 35mm cameras.

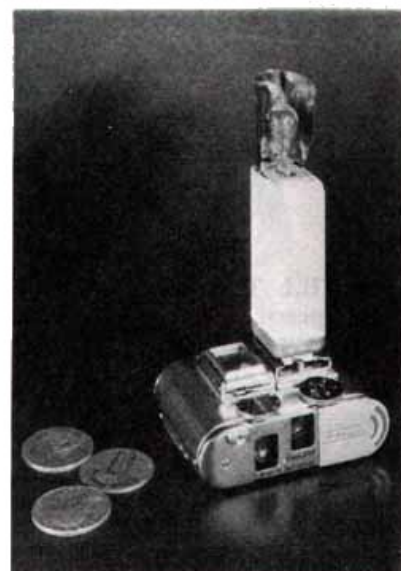
Since a mirror is used between the lens and the film, the image is reversed from left to right. This is corrected during printing by placing the negatives in the enlarger with the emulsion side away from the paper, not facing it, as usually done. Color transparencies are corrected by reversing them in the viewer or slide projector.

The Tessina is a twin-lens reflex camera. One lens takes the picture, while a second, matched lens produces an identical ground-glass image for viewing and focusing. However, the viewing lens is so close to the taking lens that, for all practical purposes, the camera can be used as a single-lens reflex camera. Automatic parallax correction is provided to assure accurate framing for closeups. The lens can be focused and the image accurately framed from infinity to nine inches.

The lenses are recessed in the camera body, eliminating the need for a lens shade. A metal cover protects the lenses when the camera is not in use. The shutter release operates only when this metal cover is fully withdrawn.

The jeweled-shutter and film-transport mechanism of the Tessina is a marvel of Swiss precision. The camera has a spring motor that winds the shutter and forwards the film. Five-to-eight exposures can be made without rewinding—in rapid sequence if desired. The shutter speeds range from $\frac{1}{2}$ to $1/500$. There is also a B setting. The shutter is fully synchronized, with M, F and X settings.

Three types of viewers are available: a pentaprism, a magnifying hood and a sports finder. The sports finder is supplied with the camera, the other two are sold as accessories. I like the pentaprism finder best. It



provides six-times magnification and a clear, easy-to-focus and frame image. With the pentaprism finder both vertical and horizontal pictures are possible.

The magnifying hood magnifies the ground-glass image eight times. It is practical for vertical compositions only. The pentaprism and the magnifying hood finders can be focused to match the eyesight of the photographer.

Since it uses 35mm film, Tessina negatives can be developed in standard 35mm tanks. The 2×2 " Tessina slide binders fit all standard slide projectors.

The camera is equipped with an accessory shoe to accommodate the tiny Metraphot exposure meter or a miniature flashgun. With the use of an accessory wrist strap the Tessina can be worn like a wrist watch. A neck chain with a tripod plate and a variety of leather cases are available.

To summarize: the Tessina is in a class by itself. It is an ultra-miniature in size, weight and appearance. It is the world's smallest 35mm camera. The precision and the reliability of the mechanism is matched only in fine Swiss watches (in fact, the Tessina is made by watchmakers). Image quality is superb, it meets professional standards.—Joseph Foldes

PORTION of Tessina negative enlarged approximately 20X shows fine quality possible both in sharpness and grain.



you must first set the meter to the ASA index of the film in use. This is done by removing the meter from the camera and turning it over. On the back, you'll find two tiny windows (one for DIN ratings, one for ASA ratings) and a tiny milled dial just beneath the light cell. Turn the dial until the correct film speed is centered in the ASA window. Then set the lens for coupling to the meter by turning the lens opening dial until f/4 appears in its window. Carefully slide the meter into the accessory shoe all the way; a ball bearing mechanism then comes into play to prevent an accidental uncoupling of the meter and lens.

The meter scale is composed of three shutter speeds—1/30, 1/125, 1/500—separated by two white lines. The line between 1/30 and 1/125 represents 1/60 second while the one between 1/125 and 1/500 equals 1/250 second. In use, the Tessina meter will read light situations ranging from 1/30 at f/2.8 to 1/500 at f/22. When turning the lens opening dial to determine the correct shutter speed, you may find that there is not enough light to get a shutter speed reading, even at f/2.8. In such cases, you'll have to make an educated guess at which speed below 1/30 second will give a correct exposure and then refer to the back of the Tessina, where the entire shutter speed range from 1/2 to 1/500 second appears in silver numbers (the 1/125 and B settings are both in red) on a black dial. The dial revolves counterclockwise and the speed desired is set opposite a heavy black line engraved on the camera body. In actual use, you should brace the Tessina or use a tripod when any speed below 1/60 second is chosen.

OPTICAL SYSTEM

Unlike other cameras, the Tessina uses a 45-degree front surface mirror in its optical system. Light enters the lens, hits the mirror and is reflected downward onto the film emulsion, which runs horizontally along the bottom of the camera body. This system is the answer to how such a small camera (2 1/2x2x1 inches) can accommodate 35mm film. A vertical 14x21mm picture is thus formed on the horizontal strip of film, but the negative is laterally reversed from left to right because of the mirror. Tessina negatives must be placed in an enlarger with the emulsion facing upward instead of toward the enlarging paper to correct this reversal.

Each time the camera bottom is removed for loading or unloading of film, this mirror is exposed and so care must be taken not to accidentally smudge its face. The small brush included with the camera should be

used to clean both lens and mirror, as any specks of dust or lint on the mirror will reflect their appearance down to the film.

FILM ADVANCE

The standard Tessina is equipped with a spring-wound motor. To wind, pull the knurled film advance dial straight out, just as you would a watch stem, and turn in the direction of the engraved arrow until the motor is fully wound. Push the winding dial back into place and you're ready to take pictures. When the shutter button positioned at the top right of the camera face is depressed, you'll hear a tiny click as the rotary shutter opens and closes. Release the button and you then hear a rather loud whirring noise as the spring film transport moves the film to the next exposure and recocks the shutter. As one winding gives five to eight shots, it's possible to shoot short sequence bursts, especially useful in a candid photo situation. When the motor lacks enough power to move the film a full frame, it locks until it's wound again, making impossible overlapped pictures due to insufficient power.

1. Quality of enlargement from 14x21mm Tessina negative is best of any pocket camera and comparable to full-sized single-frame 35mm. Camera was set at hyperfocal distance setting (nine feet); exposure 1/125 at f/8 on Adox KB 21.

2. Tessina 35L features sliding lens cap (1), taking lens (2), viewing lens (3), shutter button (4), distance scale and depth of field indicator (5), reflex viewer and sportsfinder (6), exposure meter (7) lens opening scale and exposure counter (8).

3. Tessina 35L features sliding bottom latch (9), motor wind knob (10), rewind release lever (11), shutter speed dial (12), flash sync dial (13), flash contact (14), rewind knob (15), bottom cover latch pins (16).

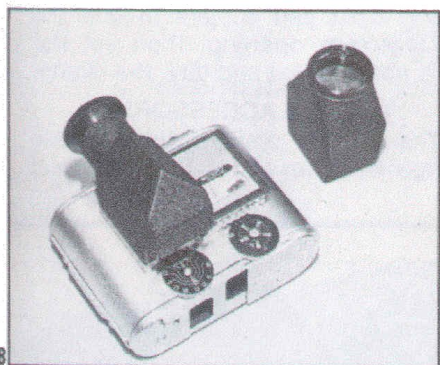
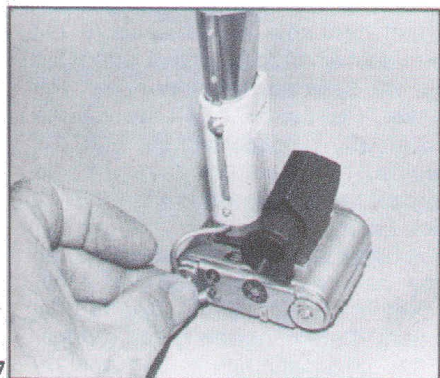
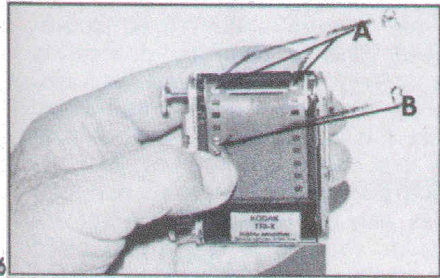
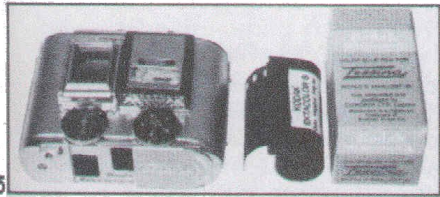
4. Before using the Tessina in its cross-coupled mode, turn the milled dial below the meter cell until the ASA index of the film can be seen in the ASA window. Then set the lens opening dial to f/4 and slide the meter in place until it locks.

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6. When film is properly loaded in Tessina, sprocket holes will engage sprockets A and B. Camera bottom can now be replaced.

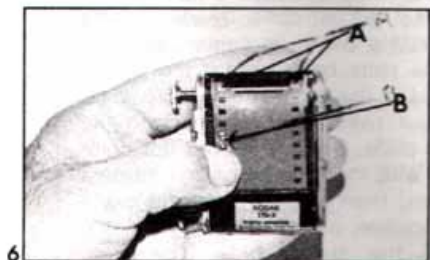
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shoe on the camera's top plate. This masterpiece of equipment miniaturization has an ASA sensitivity range of 12 to 800 and can be set to lock into the Tessina's lens opening ring. Turning the ring to open and close the lens moves a shutter speed scale to match with the meter needle. Once you've determined the correct shutter speed for the situation, transfer the meter reading to a separate speed dial on the camera back and you're ready to take the picture.

To use the cross-coupled feature,



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8. The accessory prismfinder gives a 6X magnification and allows use of the Tessina at eye level. Shown beside camera is the 8X magnifier for precision ground glass focusing.

The Tessina

Once all exposures have been made, the film must be rewound into the Tessina cartridge. This is accomplished by flicking the little arm marked R on the camera back out and upward 90 degrees to disengage the film transport system. Now pull the knurled rewind knob (marked R) out and turn in the direction of the engraved arrow until the film is rewound. As with any other camera of its type, the sudden reduction in tension when you turn the rewind knob signals that the film has separated from the take-up spool and a few more winds will finish drawing it all into the cartridge.

Everything about the Tessina operates with a clockwork feel of precision, although you may feel a bit uneasy about snapping candid shots when the film transport takes over and advances the film to the next frame. If that whirring sound bothers you, two special Tessina models designed to pacify the nervous are available—a noise-reduced Tessina using nylon gears, and a noiseless one without the spring advance motor; you must wind the film after each exposure. Personally, I enjoy the advantage of the regular spring motor and have found that there is a way to render the film advance almost inaudible in situations where you might possibly feel embarrassed by the sound of the transport mechanism in action. Hold the rewind knob tightly while shooting to prevent slack in the exposed cartridge. After taking the picture, let up on the shutter button and gradually release the tension on the rewind knob, allowing the advance to operate slowly. This cuts film advance noise to almost zero.

LOADING THE TESSINA

Tessina cartridges preloaded with a variety of film emulsions are cut, re-spooled and packaged by Concava Ltd., the manufacturer of the camera, and are available from most larger photographic dealers. You can also purchase empty Tessina cartridges (or save the preloaded ones for reuse after processing the film) and load your own with any 35mm film. If you send your exposed cartridges to a commercial photofinisher, tape a small piece of paper to them requesting return of the empty cartridges.

To prepare the Tessina for picture-taking, push the sliding latch positioned on the camera's right side to the rear and remove the bottom. Pull out both the wind and rewind knobs completely, then turn the camera's take-up spool toward the mirror until its black spring clip faces the film path. You'll notice two raised metal teeth, one on each side of the clip.

These must engage the film's sprocket holes to secure it to the take-up spool as the film is inserted under the spring clip.

You'll also see the traditional-type 35mm film transport wheel along the rear edge of the film path. This sprocket wheel advances the film once the bottom is replaced. Clean the camera's interior carefully, paying particular attention to the mirror. Now pull an inch or two of film from the cartridge to act as a leader and fasten it to the take-up spool, then continue pulling the cartridge back until it drops into place in the opposite chamber. Check to make sure that the sprockets on the take-up spool engage the sprocket holes and that the film is tight, with the two visible film transport sprockets engaging the film; then replace the camera bottom.

This is done by first fitting the bottom over the two pins at the left side of the camera, then gently seating it into position. Lock it by moving the sliding latch forward. You'll find it easiest to squeeze the camera top and bottom together while sliding the latch forward. Film tension is checked by pushing the rewind knob in to about 1/8-inch from the camera body and turning it gently in the direction of the engraved arrow until a slight resistance is felt. Now wind the spring motor until the wind knob stops—don't force! Push the wind and rewind knobs in completely, then set the exposure counter dial by rotating it with the nail of your index finger until its red dot is opposite the red index mark on the surrounding black ring. Press the shutter button twice to transport the first frame of film into picture-taking position and watch the rewind knob; it should turn each time you hear the spring motor advance the film. If the knob doesn't turn, it indicates that the film end was not secured to the take-up spool correctly. You'll have to repeat the entire loading procedure, which will reduce the number of pictures on that cartridge by two frames.

USING FLASH

Equipped with a standard PC flash connector, the Tessina is synchronized for use with flash bulbs at 1/30 second, or electronic flash at any shutter speed. Just to the right of the rewind knob, you'll find the PC connector and above that, a tiny black dial marked X and M. When using the camera with the Emolux flash gun supplied by Karl Heitz Inc., the dial should be revolved until the M is opposite the black line. The X position is for use only with electronic flash.

A special Tessina adapter plate on the base of the Emolux gun allows it to be used directly on the camera. Remove the meter and replace it with

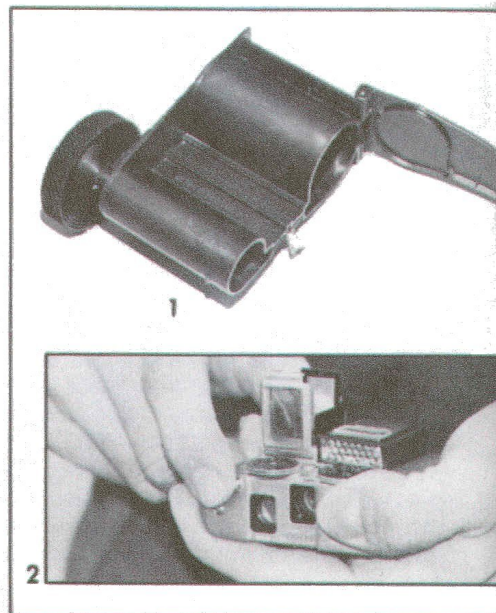
the flash. Be sure to plug the short connector cord into the PC receptacle. With its tiny reflector that slides into the unit when not in use, the Emolux is an ideal choice for pocket camera use with the Tessina; it accepts AG-1B bulbs and is powered by a standard 15-volt Mallory M-504 (or equivalent) battery, which should easily last a year or more.

Other flash guns, including electronic units, can be used with the Tessina, but as the camera has no built-in tripod socket, you'll need the accessory tripod plate (\$9.95) and flash bracket (\$5.95) to accommodate your unit to the camera. To attach, the black instruction guide plate on the camera bottom must be removed. This is done by depressing the locking pin in its center and sliding the plate back toward the sliding latch. Lift the guide plate up and off the four rivets and replace with the tripod plate. Be sure its red dot coincides with the red dot on the camera bottom, then slide the tripod plate into position until the locking pin engages the center hole. The flash bracket can now be fastened to the tripod socket and your flash unit fitted into the accessory shoe on the bracket. Personally, I find the Emolux gun ideally suited for use with the Tessina, primarily because it is so compact and so easily attached for quick use.

Exposure for flash is computed the same as for the Minolta and other pocket cameras with mechanical shutters. Determine the guide number for the particular film in use and divide this number by the distance between flash and subject to find the correct lens opening, then set the lens opening dial and take the picture.

TESSINA ACCESSORIES

The Tessina system offers a wide range of accessories that makes it



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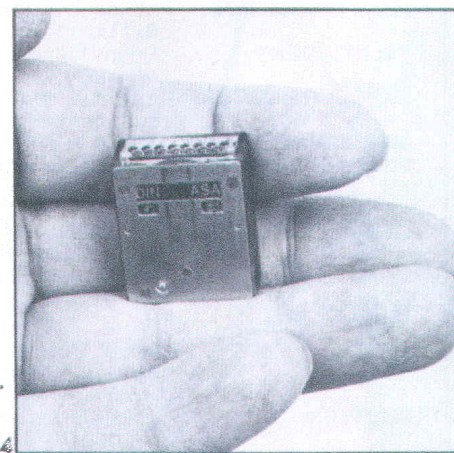
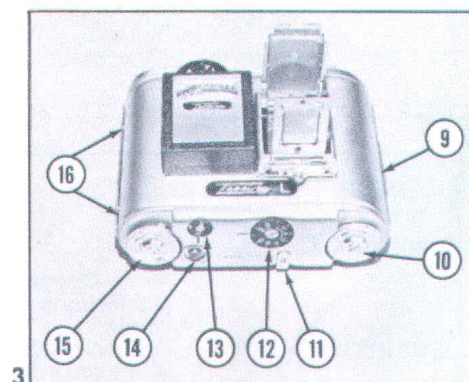
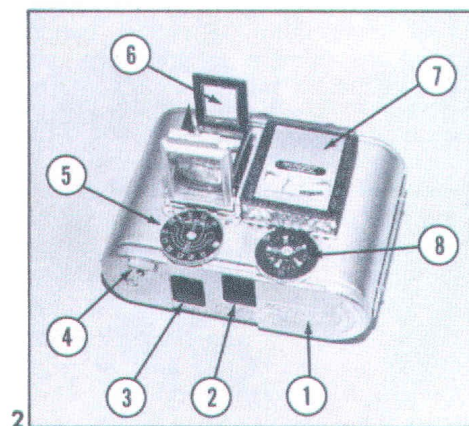
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The Tessina



One of the most unusual of the pocket cameras, the Tessina is manufactured in Switzerland and has long been imported to the United States by Karl Heitz Inc. of New York. A twin lens reflex, the Tessina produces the largest (14x21mm) of the pocket camera negatives. Its use of regular 35mm film loaded into special cartridges makes it not only a pocket camera but the world's smallest 35mm camera. A favorite tool of the CIA, FBI and other investigative agencies, the Tessina doesn't really

resemble the traditional camera (or other pocket cameras) in appearance and so makes a fine companion for travelers who like to take candid photos—by the time the subject has figured out that his picture is being taken, a half-dozen or more are in the camera.

CROSS-COUPLED EXPOSURE CONTROL

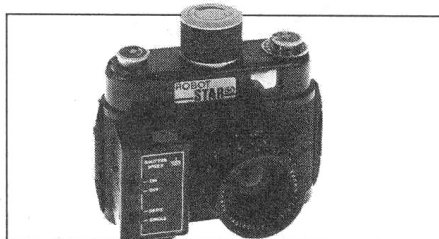
The Tessina is equipped with twin 25mm f/2.8 Tessinon lenses—one for viewing and one for taking the pic-

ture. Its taking lens has a built-in haze filter, can be closed down to f/22 and focuses from 12 inches to infinity. A rotary shutter provides a full range of speeds from 1/2 to 1/500 second and Bulb. The Tessina can be used as any other nonautomatic camera—that is, you determine the correct combination of lens opening and shutter speed by using a separate meter, then set the camera controls and take the picture. Or you can use the cross-coupled exposure meter, which fits into an accessory

THE CAMERA COLLECTOR

Continued from previous page

Superflex stainless steel spring, providing up to 50 exposures on a single wind. Two other features that differentiate the latest model from some of its illustrious scientific and data recording predecessors are its three-etched-frame viewfinder (covering lenses from normal 38–40mm up to 150mm tele) and electromagnetic shutter release. Lest you think this is a relic of The Great Mechanical Age, consider its incredible firepower of up to 12 frames per sec.—not bad for a camera that's roughly the size of a compact SLR!



Redoubtable Robot Star 50 D: Latest electronically controlled version of the spring drive classic gets up to 12 fps.

To the right of the screw-mount 40mm f/1.9 Schneider Xenon lens is an electronic control box (containing a 6-volt silver oxide battery) that's not found on older Robots (or on the still available, all mechanical, Robot Star 50 and 25). On the "Type A" Star 50 D that we tried, this box has an on-off switch and "single-serie" switch on the front, a battery check button on the side and corresponding LED on top. The sole shutter speed available is $\frac{1}{500}$ sec. Those interested in shooting conventional pictures should get the "Type B" model, which does everything the "A" does, but provides shutter speeds of $\frac{1}{2}$ – $\frac{1}{500}$ sec. plus B, set via a dial on the front of the "black box." Classic Robot Star features are knurled knobs on top, which are connected to the take-up and rewind shafts, a back-mounted rewind lever, film speed reminder dial under the rewind knob, and extremely robust, all-metal construction. Purists will delight in the beautifully satin black-finished lens with extremely smooth focusing action and Robot's distinctive color-coded depth-of-field scale, but will be less than thrilled with its five-bladed diaphragm. Photographers like yours truly, who use Robots as indestructible, high performance "street cameras," will admire the smallish viewfinder for its clarity while grumbling that it's cluttered up with three framelines. Oh well, what do you expect for only \$1,948 complete with 40mm f/1.9 lens?

Let's conclude with yet another sub-35mm-format 35mm creation, the afore-

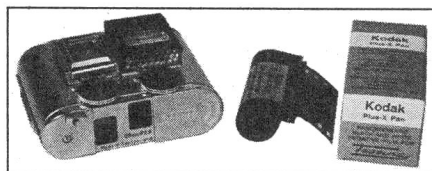
Continued on page 78

THE CAMERA COLLECTOR

Continued from page 76

mentioned Swiss-made Tessina, which makes 14x21mm images on standard 35mm film loaded in special slim cartridges. Measuring but $2\frac{1}{2} \times 2 \times 1$ in. and weighing only $5\frac{1}{2}$ oz., the Tessina is the only spring motor drive twin-lens reflex I can think of! Slide the nameplate to the left and you uncover both viewing and 25mm f/2.8 Tessinon taking lenses and an adjacent shutter release. Point them forward and glance at the top and you'll see two tiny knurled dials, a combined aperture (f/2.8–22) wheel with inset, manually set frame counter on the left, and a focusing wheel with depth-of-field scale on the right. Behind the latter is a flat reflex finder (sans light-excluding hood) that pops up to become a very effective eye-level sportsfinder.

On the back of the camera there are rewind and motor wind knobs on the



Timeless Tessina is literally made like a Swiss watch, packs more features into less space than any current ultramini. ends, a shutter speed dial ($\frac{1}{2}$ – $\frac{1}{500}$ sec. plus B) and rewind release lever near the center, and a PC outlet and sync delay (M,F,X) switch near the rewind knob. Open the camera by releasing a catch on the right and lifting off the back; load it much as a conventional 35. Like the Robot SC, the Tessina achieves its compactness by reflecting the image onto the film with a single-surface mirror, but the Tessina only needs one of 'em.

As a picture taker, the Tessina is a curious blend of practicality and sheer whimsy. The standard reflex finder is next to useless for focusing the lens (the viewing image is miniscule and the depth of field is enormous) but it's just the ticket for centering your subject when taking sneaky pictures. The sportsfinder is much better, but then you have to estimate your distances.

Although you can advance the film after you fire the very quiet shutter (by waiting to release finger pressure on the shutter release), the standard motor is rather noisy, advancing film with a high pitched "bzzzzt." The solution to this is to order either a motorless Tessina or a nylon-gearred one at additional cost. On the plus side, the current Tessinas seem to perform noticeably better than the one I tried 15 years ago—they are claimed to provide better film flatness. No, the Tessina isn't cheap either at \$399.95, but beautiful Swiss anachronisms seldom are.—THE END



Photographica-, Second hand und Fotospezialitäten



Contax G1 – Leica M6: Zwei Unvergleichliche im Vergleich

Terminkalender Alle Fotobörsen des
gesamten Jahres auf einen Blick
Jetzt noch mehr internationale Termine



**Schmuckstück für die Vitrine
Linhof Technika Gold**



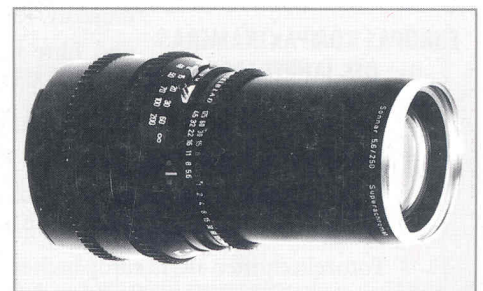
**Präzision im Taschenformat
Tessina 35 (Teil 1)**



**Agfa-Chronik 8. Teil
Gründung der Bayer AG**



**Olympus OM-3 Ti
Topmodell mit Titangehäuse**



**Meilensteine deutscher Optik
Ludwig Bertele und das Sonnar**

The Camera Collector

The Swiss connection: America's prime purveyor of photographic exotica resides in (would you believe?) Woodside, NY.

by Jason Schneider



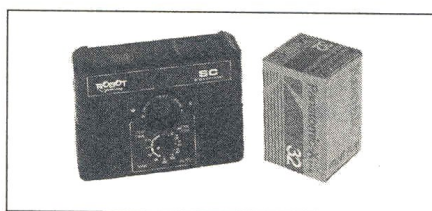
Over the past 17 years I've written about hundreds of cameras and scores of camera manufacturers, but seldom have I devoted an entire column to the photographic products of a single importer and distributor. The firm that merits this distinction is none other than Karl Heitz, Inc. of Woodside, New York, purveyor of, perhaps, the world's most incredible assortment of peculiar cameras. Known affectionately as "the Swiss connection" for its long association with Alpa (and the national origin of its flamboyant namesake and founder), Heitz, Inc. also represents such ancient and noble brands as Gitzo tripods of France, Robot cameras from Germany and that curious Swiss confection known as the Tessina 35. Actually, what looks like a technological farrago turns out to have a surprising degree of underlying unity—all this equipment is quite expensive, virtually hand made, and quintessentially European.



For fanatics only, pin-registration version of Alpa 11si grabs film by sprocket holes as exposure is made for perfect multiple exposures, among other things. Heitz also has Alpa's Roto 360° panoramic cameras!

Let's jump right in with the strangest bird of all, a genuine spy camera that's about the same size as a pack of cigarettes. No it's not the Tessina, although that ultraminiature twin-lens reflex surely qualifies; it's the Robot SC electronic, described in the brochure as "A unique camera with minimal dimensions for special surveillance, suitable in particular for discreet operation." Mini-

mal dimensions it surely has, at about $3\frac{1}{2} \times 1 \times 1\frac{5}{8}$ in. and it even uses standard 35mm film. However its zone-focusing 30mm f/5.6 Xenogon lens and 16x16mm format are distinctly non-standard and so is practically everything else about this tiniest of Robots.



A real spy camera, the stealthy Robot SC electronic has TTL autoexposure, electric drive and a wild light path.

Atop the lens is a lever attached to the front-mounted focusing ring that's settable to three click-stopped positions—0.8–1.2m (about 3–4 ft.), 1.2–2.5m (about 4–8 ft.) and 2.5m–infinity. The entire lens moves in and out as you focus; to keep body depth to a minimum while providing space for a behind-the-lens autoexposure system, the image is reflected down then back to the film plane via two high quality single-surface mirrors behind the lens. Below the lens is a combined manual shutter speed/autoexposure film speed dial with white index dot. Turn it to settings on the left and you can set manual shutter speeds from $\frac{1}{30}$ – $\frac{1}{500}$ sec. plus B with X sync at $\frac{1}{60}$ sec. On the right are DIN and ISO/ASA settings, the latter ranging from 100–3200. In auto mode the two-bladed, behind-lens, electronically controlled shutter provides stepless speeds from $4\frac{1}{500}$ sec., but the SC's aperture remains fixed at f/5.6 in either mode.

Turn the twist lock on the bottom from "ZU/CLOSE" to "AUF/OPEN" and you can slide off the back of the camera, which doubles as a clever dark-room-loaded film magazine. Lift off the cover plates atop either end and you're greeted with a pair of identical hollow film spools equipped with ingenious spring-loaded film catches to grab the film by the sprocket holes. Wind about 40 exposures' worth of film onto the supply spool, attach a leader to the take-up spool, slide the spools into their respective chambers, close the covers

PETERSENS Guide to

POCKET CAMERA PHOTOGRAPHY

By Kalton C. Lahue and the Editors of Photographic Magazine

CURRENT CAMERAS

Full details on Kodak Pocket Instamatic, Minolta, Minox, Tessina and Yashica Atoron

HOW THEY WORK

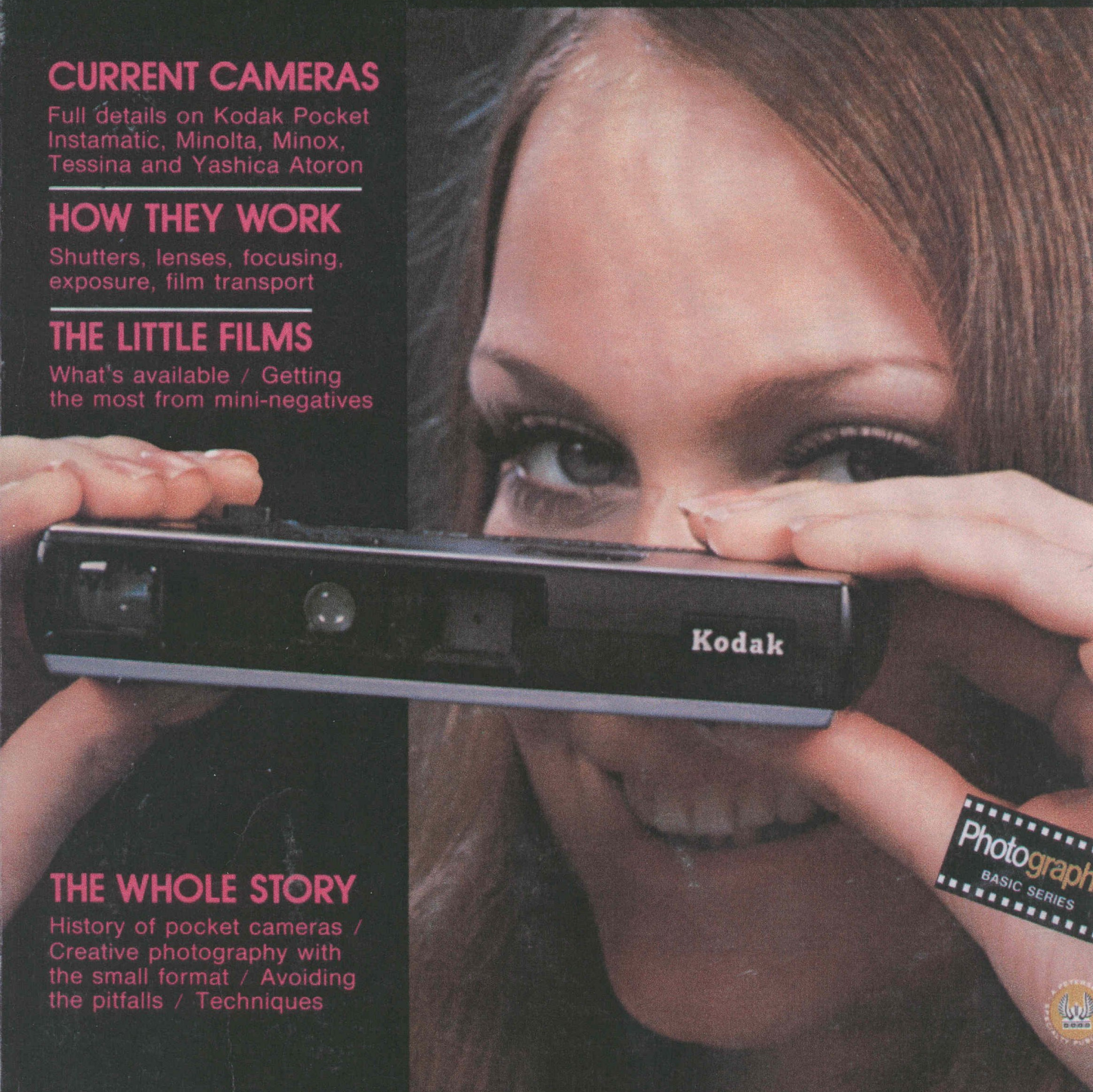
Shutters, lenses, focusing, exposure, film transport

THE LITTLE FILMS

What's available / Getting the most from mini-negatives

THE WHOLE STORY

History of pocket cameras / Creative photography with the small format / Avoiding the pitfalls / Techniques



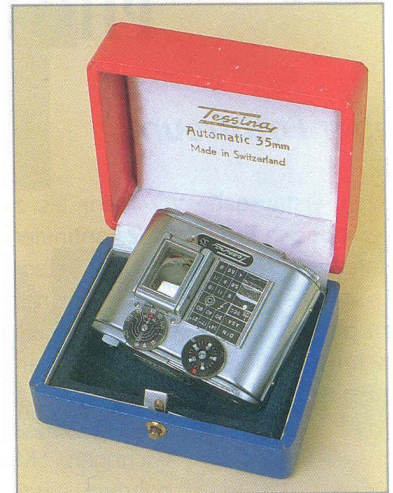
Photographic
BASIC SERIES



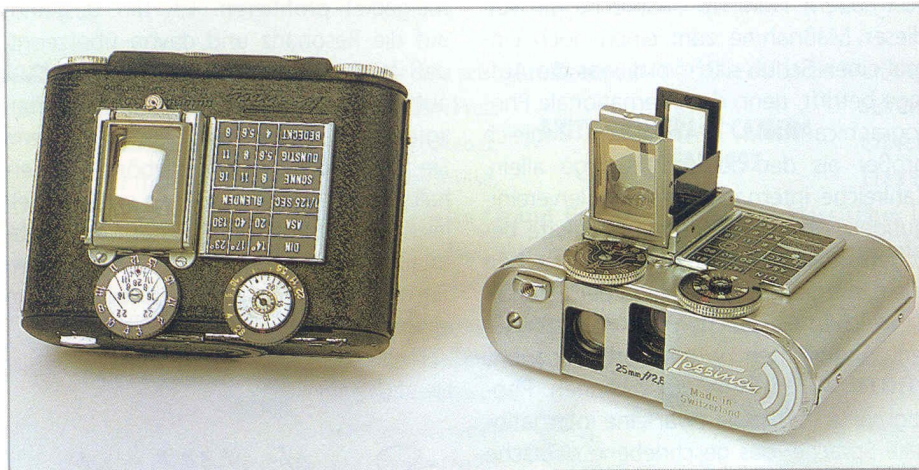
PRÄZISION AUS DER SCHWEIZ

Zweiäugige Reflex im Taschenformat (1)

Aus der Schweiz, dem Land mit der großen Uhrmachertradition, kam in den 60er bzw. 70er Jahren eine außergewöhnliche Kamera, die bis heute wegen ihrer Präzision und soliden Mechanik bei Kennern einen klangvollen Namen hat. Ähnlich einer Minox-Kleinstbildkamera geht von der Tessina eine unbeschreibliche Faszination aus. Die geheime Rolle während der unrühmlichen Watergate-Affäre und nicht zuletzt ein spektakulärer Einsatz im US-Agententhiller „Topas“ von Alfred Hitchcock, der Streifen von 1969 spielt im revolutionären Kuba, haben dieser Kamera einen gewissen Nimbus eingebracht, der sicher auch zukünftig anhalten wird. Weniger unbedeutend dürfte dabei die Tatsache sein, daß es sich bei dem mittlerweile heißbegehrten Fotogerät gewiß um die kleinste automatische Reflexkamera der Welt handelt.



Präsentation einer mattverchromten Tessina 35 in der ansprechenden, aufwendig verarbeiteten Geschenkbox



film, der in kleinere Spezialkassetten gefüllt werden muß. Auf den entsprechend kürzer geschnittenen Film passen dann bei dem reduzierten Format von 14x21 mm maximal 24 Bilder.

Filmtransport über Federwerk

Mittels des eingebauten Federwerks können schnell hintereinander acht bis zehn Auslösungen realisiert werden, ohne neu aufzuziehen. Wegen der geringen Ausmaße der Kamera - mit einer Länge von 68 mm, 52 mm Breite und etwa 23 mm Höhe (ohne aufgeschobenem Sucher) paßt sie sogar in eine Zigarettenschachtel - hätte das Objektiv in Aufnahmestellung normalerweise keinen Platz gefunden, wäre nicht das Bild um 90° über einen Spiegel umgelenkt worden. Die Tessina

Ende der 50er Jahre hatte Dr. Rudolf Steineck, von dem schon die bekannte Armbandkamera A-B-C stammte, die Tessina zur Serienreife gebracht. Das kleine Meisterwerk ist schließlich bei der Concava AG (Lugano) in Zusammenarbeit mit der Uhrenfabrik W. Siegrist & Cie. AG (Grenchen) hergestellt worden. Nach jahrelanger Forschung konnte sich das Ergebnis sicher sehen lassen, denn einem Vergleich mit bereits auf dem Markt befindlichen Kameras mußte sie kaum scheuen. Nicht von ungefähr gewährte man ein wenig stolz eine verlängerte Garantie von bis zu fünf Jahren.

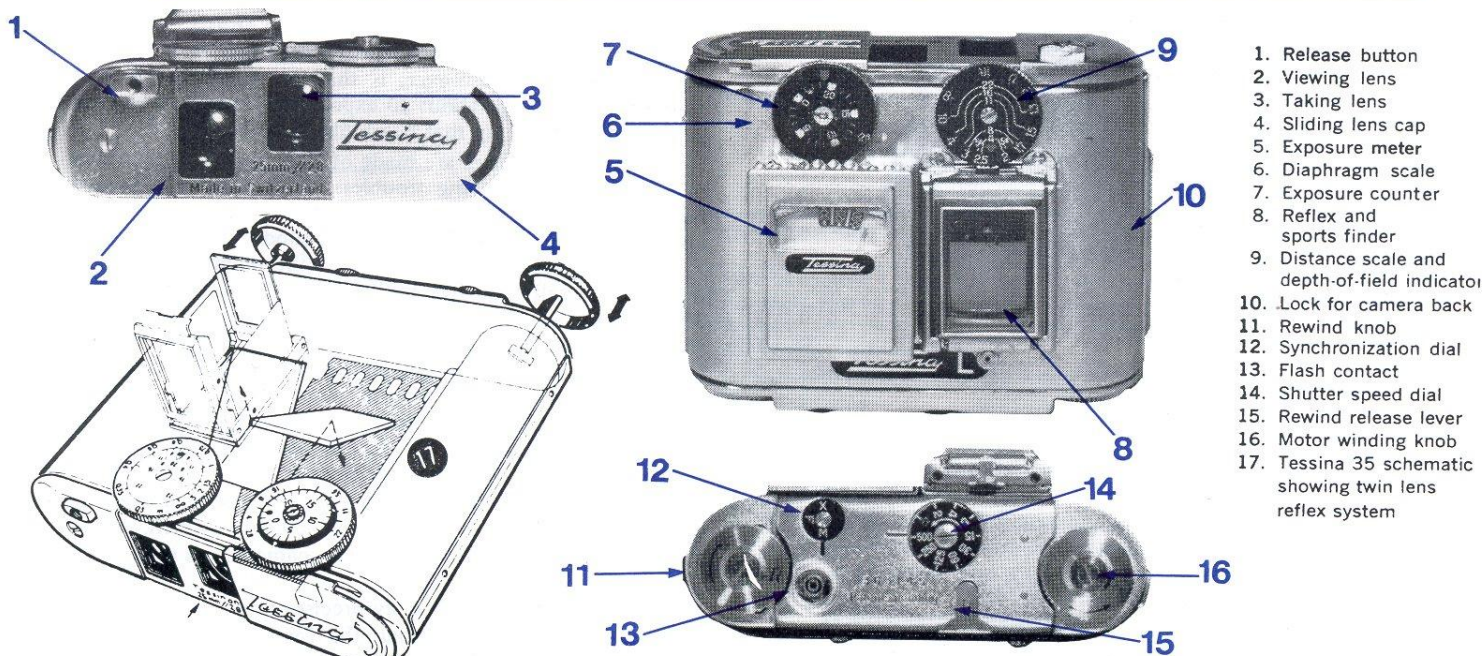
Was hat nun die phantastische Tessina alles zu bieten? Die Zweiäugige mit der verdeckbaren vorderen Aufnahme- und Sucheröffnung wurde konstruiert für die Verwendung von perforiertem Kleinbild-

Schwarze Tessina mit eingeklapptem Sucher in Ruhestellung, daneben aufnahmebereite Tessina mit geöffnetem Schieber und ausgeklappten Durchsichts- bzw. Lichtschachtsucher (oben). Selten zu finden, aber für die Sammlung besonders reizvoll sind die damaligen Filmschachteln und die Original-Anleitung.



Tessina 35

WORLD'S SMALLEST 35 MM CAMERA



1. Release button
2. Viewing lens
3. Taking lens
4. Sliding lens cap
5. Exposure meter
6. Diaphragm scale
7. Exposure counter
8. Reflex and sports finder
9. Distance scale and depth-of-field indicator
10. Lock for camera back
11. Rewind knob
12. Synchronization dial
13. Flash contact
14. Shutter speed dial
15. Rewind release lever
16. Motor winding knob
17. Tessina 35 schematic showing twin lens reflex system

A Technical Miracle of Swiss Chronometer Precision, carried as conveniently as a wallet, watch, lipstick or pack of cigarettes—always ready to shoot—anytime, anywhere.

SMALLER AND LIGHTER: Lightweight ($5\frac{1}{2}$ ounces), compact ($2\frac{1}{2} \times 2 \times 1\frac{1}{2}$ "), smaller than a pack of cigarettes, and any 16mm subminiature camera, but . . .

LARGE IMAGE: 14x21mm picture is 2 to 3 times larger than that of other subminiature cameras.

CHOICE OF 35mm FILM. Takes any standard 35mm color or black and white film, but . . .

MORE ECONOMICAL: Same film length renders $2\frac{1}{2}$ to 3 times as many pictures as standard 35mm camera.

EVER READY: Pressing the button takes the picture, counts the exposure, transports the film and cocks the shutter, readying the TESSINA for the next shot.

AUTOMATIC FILM TRANSPORT: Swiss precision miniature motor provides 8-10 pictures without rewinding, ideal for rapid action photography.

AUTOMATIC LIGHT READING: TESSINA 35 L with cross-coupled exposure meter.

TWIN-LENS REFLEX: 2 reflex systems with parallax-corrected lenses.

NEEDLE SHARP: High resolution TESSINON 25mm f/2.8 renders precise color fidelity, critical sharpness and authentic contrasts, suitable for bigger-than-lifesize enlargements and projection. Angle of view 53° .

GROUNDGLASS IMAGE: Through-the-lens viewing for accurate framing, focusing and depth-of-field control.

CHOICE OF DISTANCES: Continuous focusing from infinity down to 9" for close-ups, but TESSINA may also be PRESET for universal distance range.

CHOICE OF LENS STOPS: From f/2.8 to f/22.

CHOICE OF SPEEDS: Swiss precision movement with speeds from $\frac{1}{2}$ -1/500 seconds and B.

CHOICE OF SYNCHRONIZATION: M or X, attachable Tessina flashgun.

CHOICE OF FINDERS: Reflex and Sports-finders permit waist level, eye level and 90° angle shots, 8X magnifier or 6X prism-finder.

CHOICE OF FILTERS: Yellow, green, red.

CANDID SHOTS: In your hand or pocket, on its wrist-strap or neckchain, the TESSINA is ideally suited for taking unsuspected pictures.

JEWELLED MECHANISM: Ruby stones as used in fine Swiss watches eliminate friction and wear, guarantee smooth operation.

EASY PROCESSING: Any finisher who processes 35mm film—any 35mm tank.

CHOICE OF ENLARGER: Giant enlargements, up to 20x24" and beyond, with standard 35mm enlargers.

CHOICE OF PROJECTOR: Any 35mm projector, with cardboard or glass mounts and NEWTON-ring-free glass.

EASY FIT: Can be conveniently carried all year, in coat, hip or shirt pocket, on your belt, in a lady's purse, folio, etc.

EASY TO USE: Detachable plate on camera with brief instructions for use.

CHOICE OF COLORS: The TESSINA is available in chrome, black, red or gold finish.

CHOICE OF NOISE REDUCED AND NOISE FREE MODELS.

PROTECTION: Shockproof construction withstands the most rugged use, for lifelong durability.

SWISS CHRONOMETER PRECISION: Custom-built with meticulous precision like a fine watch, as only the famous watchmakers of Switzerland can do it.

SWISS QUALITY CONTROLS: Meeting the most rigid precision standards, every TESSINA is scrupulously quality controlled, carries a FULL 5 YEAR WARRANTY.

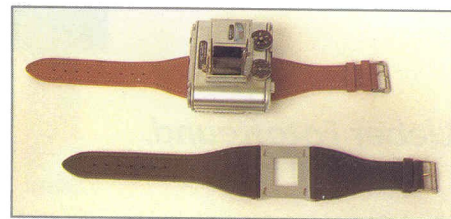
Tessina 35

THE ONLY SUBMINIATURE THAT REALLY MAKES SENSE!

PRÄZISION AUS DER SCHWEIZ

Zweiäugige Reflex im Taschenformat (2)

Nachdem in der vorangegangenen Ausgabe die Tessina mit ihrer ungewöhnlichen technischen Ausstattung vorgestellt wurde, beschäftigt sich diese Folge mit dem Zubehör. Viele wissen kaum, welch reichhaltige Auswahl an hochinteressantem Zubehör damals angeboten wurde, das natürlich für Sammler dieser Marke von besonderem Reiz ist.



Mit dem Lederarmband läßt sich die Kamera wie eine Armbanduhr am Handgelenk tragen. Auch eine anschraubbare Stativplatte stand zur Verfügung, mit der man sich die Tessina zum Tragen wie eine Halskette umhängen konnte.



Der flache Belichtungsmesser, auf eine Tessina, aufgeschoben und dabei mit dem Blendenrad der Kamera gekuppelt. Diese seltene Zubehörteil ist in Sammlerkreisen sehr gesucht.

mit der das Scharfstellen über die Mattscheibe insbesondere im Nahbereich merklich einfacher wird. Das Okular ist um $\pm 3,5$ dpt. verstellbar. Für ein seitenrichtiges Bild und bei Queraufnahmen sollte dagegen der sogenannte Pentaprismensucher zum Einsatz kommen.

Gekuppelter Belichtungsmesser

Mit einem ultraflachen Belichtungsmesser (nur knapp 10 mm hoch, 26 mm lang, 22 mm breit) wurde zur Tessina ein äußerst interessantes Zubehörteil geschaffen. Das auf Selenzellenbasis arbeitende Meßinstrument wird neben dem Sucher auf den Aufsteckschlitten der Kamera geschoben und dann mit dem verzahnten Blendenrad gekuppelt. Der im Fenster sichtbare Zeiger pendelt sich auf die ermittelte Verschlusszeit ein. Angegeben sind die Zeiten 1/30, 1/125 und 1/500 Sek., dazwischenliegende Werte (1/60 und 1/250) werden durch Markierungen gekennzeichnet. Leider waren ältere Kameras noch nicht für den Belichtungsmesser vorbereitet. Sie ließen sich aber leicht nachrüsten, indem beim Aufsteckschlitten lediglich die vordere Kante durchbrochen werden mußte, was erfreulicherweise nur geringe Kosten verursachte.

Bei Anwendern und Sammlern der Tessina ist übrigens kaum bekannt, daß auch Korrekturfilter auf dem Markt waren. Es handelt sich dabei um UV-, Gelb-, Grün-, Rot- und Konversionsfilter, die jeweils vor das Aufnahmeobjektiv zu stecken sind.

Um die Tessina ordnungsgemäß und dem hohen Wert angemessen aufzubewahren, standen ein robustes Sportetui sowie das kleine Luxusetui mit Reißverschluß zur Wahl. Eine größere Ausführung da-

Im Laufe der Zeit wurde für die Tessina ein umfangreiches Zubehörprogramm angeboten. Zum Schneiden des handelsüblichen Filmmaterials und Auffüllen in die Spezialpatronen war ein Umspüler verfügbar, der immer dann notwendig wurde, wenn keine fertigen Filme (z.B. Adox KB 14, 17 oder 21, Extachrome-Colorumkehrfilm, Kodak Tri-X) zu kaufen waren. Die Filmpatrone faßt 44 cm SW- oder 38 cm Farbfilm.

Zur Stativbefestigung oder Fixierung der Tessina auf einer besonderen Verbindungsschiene für Blitzgeräte dient eine praktische Stativplatte, die auf die Kamerarückseite aufgesteckt wird. In Verbindung mit dieser Platte und einer daran eingeklinkten Schlangenkette kann der Fotoapparat sogar bequem am Hals hängen. Andererseits läßt sich die Tessina ähnlich einer Steineck A-B-C an dem Handgelenk tragen. Hierzu lieferte man ein Lederarmband, das genau wie die

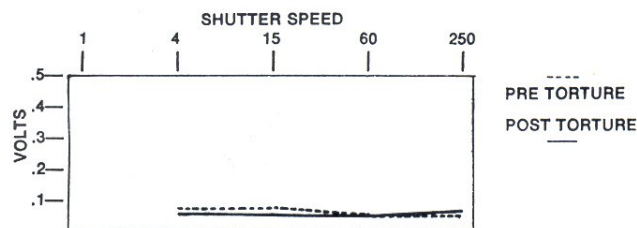
Stativplatte an der Kamerarückwand angebracht wird. Je nach Zweck sind unterschiedliche Sucher aufschiebbar. Für Schnappschüsse und Sportaufnahmen ist die Kombination von einem Durchsichtsucher mit Leuchtrahmen bzw. Lichtschachtsucher vorgesehen. Etwa 8fache Vergrößerung verspricht eine Speziallupe,



Das Pentaprisma liefert ein seitenrichtiges Bild. Das gesuchte Zubehör eignet sich besonders für Aufnahmen im Querformat.

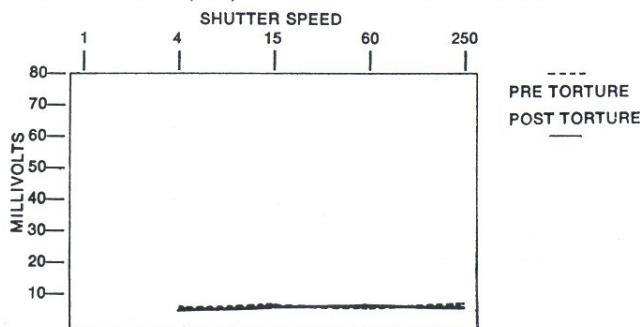
SHUTTER TRIP AND TRAVEL: The gentle release of the Tessina is especially appropriate for the low inertia of this tiny camera.

VIBRATION LEVEL: The Tessina shows less vibration than all the more conventional cameras tested, putting it in the Minox league.



Comments: There is a confidence-inspiring utilization of space without undue miniaturization of parts. Typical of the good design practices is the placement of the mainspring inside of the take-up spool. The watchmaker's touch is evident elsewhere, though—the slow-speed gear train features jeweled bearings, for instance.

NOISE LEVEL: This, too, is below level of conventional cameras.



Noise and vibration standards do not exist, but relative levels become evident when charts for several cameras are compared.

METER SPECIFICATIONS:

Type: Selenium	Zeroing provision: No
Accuracy: Within 1/4 stop	Parallax: No
ASA range: 12-800	Battery test: —
Acceptance angle: 40 degrees	
Response discrimination: Good	
Accessories: None	Scale legibility: Fair
Movement balance in various positions: Fair	

LENS PERFORMANCE: Because of the camera's design, the mirror that "folds" the image was considered to be part of the optical system, and therefore all tests performed included the mirror in the system. When off-axis tests were at first somewhat disappointing, the mirror was suspected. Sure enough, there was a smudge on it—my fault. Results with a clean mirror were very much improved. So, take care: when changing film, keep your fingers clear of the mirror chamber to assure the best possible results.

Electronic bench tests indicate that the lens has very good contrast, with the center region peaking at $f/4$. Even at the short edge of the frame (which is quite a pronounced oblong), the optimum was reached by $f/5.6$. On the long side of the oblong, where the lens must cover a field of more than 47 degrees, $f/8$ was needed to optimize performance.

The lens appears to be up to yielding good results on the small, 14x21-mm negative. Color fans should be pleased with it too, as the residual chromatic aberrations were very small.

All of this speaks well for the entire system, both lens and mirror. The latter has just as important a role as the former and too often is considered to be a non-critical component. A mirror not perfectly flat, when placed in the ray-path of a lens, can introduce aberrations (astigmatism, etc.) of which the lens itself may not be guilty.

Conclusion: Because of the small negative, the camera requires a very well corrected lens to answer the demands of greater than average enlargements. This lens can meet those demands.

MISCELLANEOUS DATA

MISCELLANEOUS DATA		PRE-TORTURE			POST-TORTURE		
Focusing System: Groundglass and Sports Finder							
Accuracy over range	Range	1 ft—∞			1 ft—∞		
		∞	5M	1M	∞	5M	1M
		OK	OK	OK	OK	OK	OK
Shutter-trip force:		265 gm			250 gm		
Shutter-trip travel:		1-1/2-mm			1-1/2-mm		
Self-timer:	Minimum	—			—		
	Maximum	—			—		
Viewfinder: Twin-lens reflex							
Framing Accuracy		OK			OK		
Parallax Corrected		No			No		
Synchronization: Std. PC outlet							
Flashbulb		8 msec			7 msec		
Strobe		0.0 msec			0.0 msec		
Contact Resist		0.4 Ω			0.5 Ω		
Insulation		OK			OK		

STRIPDOWN REPORT

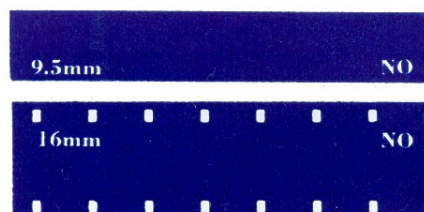
	Interior	Exterior	
Material choice:	Good	Good	Modular construction? Yes
Assembly, Finish:	Good	Good	Replace key parts easily? Yes
Repair access: Good			Seal against dirt: Poor
Adjustment provision: Good			
Do frequently made adjustments require major stripdown? No			

Conclusion: A very clever design, in which every cubic centimeter has been utilized without unnecessarily complicating the various modules. However, the small size dictates fine parts, and close tolerances, so it *must* be kept clean —Norman Goldberg

THE INIMITABLE

Tessina 35

NEGATIVE-LY SPEAKING



AND... POSITIVE-LY SPEAKING



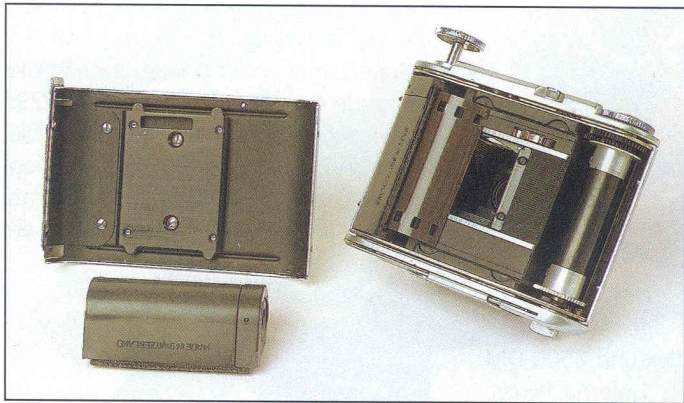
35 MM AND SUBMINIATURE CAMERA

...USES ANY 35 MM FILM, PROCESSED ANYWHERE



Die Aufsicht auf die Kamera läßt schon in etwa erahnen, um welch beeindruckendes Präzisionsgerät es sich bei der Tessina handelt. Auf engstem Raum ist hier eine beachtliche Technik untergebracht.

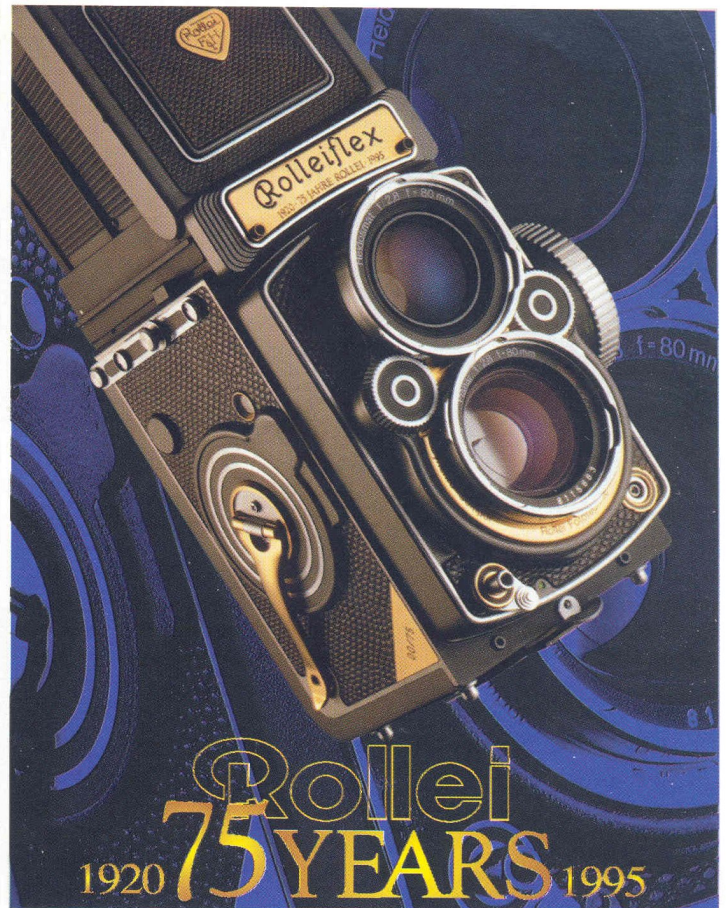
verfügt außerdem über das Aufnahmeobjektiv Tessinon 1:2,8/25 mm, das ein überragendes Auflösungsvermögen auch bei Farbaufnahmen dank Lanthan-Gläsern besitzt. Man kann bis auf 22 abblenden. Der oberliegende Entfernungsring mit kombinierter Schärfentiefskala reicht von Unendlich bis auf 30 cm heran. Für die Reproduktion von Schriftstücken ist die



Die Abbildung zeigt die geöffnete Kamera mit abgenommener Rückwand und bereits eingelegtem Film, der allerdings noch in die gegenüberliegende Spule geführt werden muß.

Tessina daher besonders geeignet, zumal Bildausschnitt und Schärfe vorteilhaft über den aufschiebbarer Sucher (verschiedene Ausführungen waren lieferbar) möglich wird. Der vorliegende Zentralverschluß weist Zeiten von 1/2 bis 1/500 Sekunde sowie B aus. Er ist vollsynchronisiert, die erforderlichen Einstellungen (M und X, bei frühen Modellen zusätzlich F) erfolgen über eine Synchronscheibe auf der Kamerarückseite. In Ruhelage werden Aufnahme- und Sucherobjektiv durch einem Schieber geschützt, der gleichzeitig den Auslöser verriegelt. Der zweite Teil der Tessina-Geschichte folgt in der nächsten Ausgabe und stellt das ungemein interessante und reizvolle Zubehör vor, von dem es eine erstaunliche Vielfalt gegeben hat.

Hubert E. Heckmann



75 Jahre Rollei. 75 Jahre anspruchsvolle Fototechnik mit wegweisenden Geräteentwicklungen. Wie die zweiäugige Rolleiflex, die „Rollei“ schlechthin.

Ihr Prinzip begeisterte Generationen von Fotografen: Die Verwendung gleichartiger Objektive für Aufnahme und Sucher. Als kleine leichte Handkamera mit exzellenten Objektiven und der Möglichkeit, das Motiv vor und während der Aufnahme auf der großen Mattscheibe zu beurteilen. Jetzt wird ihr ein ganz besonderes Denkmal gesetzt. Mit einer Jubiläums-Edition der aktuellen **Rolleiflex 2,8 GX**. Ein Jahr lang Monat für Monat 75 hochwertig ausgestattete Kameras für die anspruchsvollen Rollei-Liebhaber in aller Welt. (Ebenfalls in einer auf 900 Exemplare begrenzten

Jubiläums-Edition: die nicht minder berühmte Rollei 35.)

Rollei
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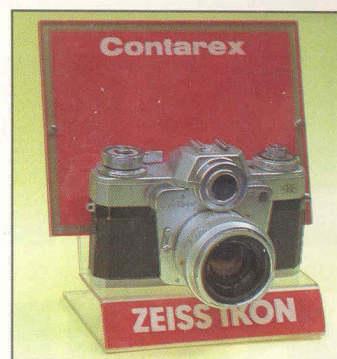
Ich möchte mehr über die Rollei Jubiläums-Editionen erfahren und bitte um ausführliche Informationen.

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Photographica-, Second hand und Fotospezialitäten

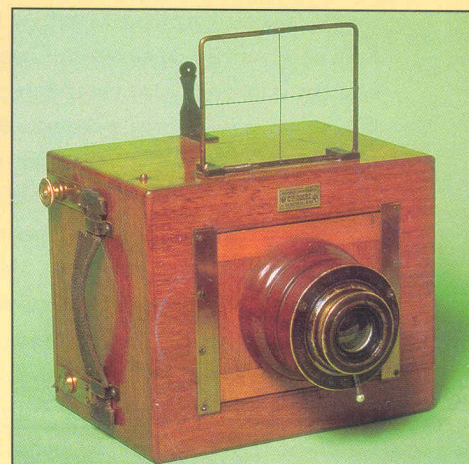


Canonflex: Canons Einstieg ins SLR-Geschäft

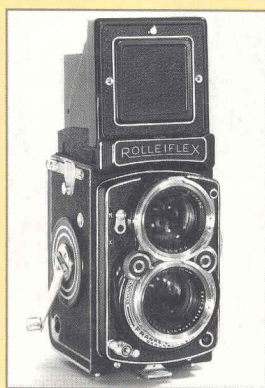
Terminkalender Alle Fotobörsen des gesamten Jahres auf einen Blick mit vielen internationalen Terminen



Tessina und Zubehör (2)
Präzision aus der Schweiz



Ottomar Anschütz
Die Anfänge der Pressefotografie (1)

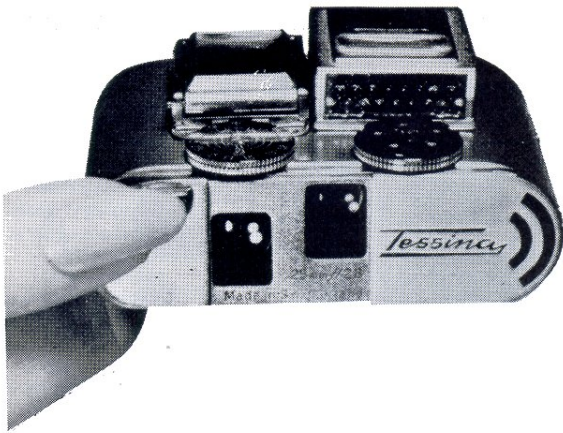


75 Jahre Rollei (1): Die Zweiäugigen und die Geschichte eines seltenen Schnäppchens



Agfa-Chronik 9. Teil
Das Ende der Militärregierung

Lab report TESSINA 35L



FIELD CHECK

Camera Type:	Sub 35-mm twin-lens reflex, using 35-mm film in special 18-20 exposure cassettes.
Lens:	Tessinon 25-mm f/2.8; min. focus, 12 in. Diaphragm closes to f/22
Shutter:	Between-the-lens; 1/2 to 1/500, plus B
Viewfinder:	Groundglass plus slip-on sports finder
Flash Synchronization:	M, X
Film Transport:	Spring-wound automatic film advance and shutter cocking
Other Features:	Coupled meter (optional), cable socket
Weight:	5 1/2 oz.
Dimensions:	2 1/2x2x1 in.
Accessories:	Wrist strap, focus magnifier, tripod plate

When I was first asked to test the Tessina 35L, I didn't quite know whether to laugh it off or not. After all, what respectable pro would go out on a job with such a tiny camera? But it only took me a few rolls of film to gain a healthy respect for this precision device.

I got excellent 8x10s, using even fast films such as Kodak Tri-X, from the 14x21-mm Tessina negatives. Of course, the main secret is in the processing—fine-grain development, great care to equalize processing and washing temperatures—and a good, sharp enlarging lens. But, of course, your camera's lens must first resolve a sharp image on the film. And unless the shutter, diaphragm, and exposure meter are also functioning right on the button, no amount of critical handling in the darkroom can enable you to produce clean, sharp prints at the more than 12X magnification needed for an 8x10 print from the small Tessina negatives. The Tessina I tested was functioning with all systems "A-OK."

Because it is such a small camera, you can handle and carry the Tessina in a variety of ways. I chose a wrist strap, so that I could carry the camera around with me as if it were a watch. By wearing the Tessina just under my jacket sleeve until ready to shoot, I was able to get some interesting photos that larger, bulkier equipment would have made more difficult if not impossible. The fact that the camera was on my wrist somehow made using it seem less conspicuous than is the case with most other subminiature cameras.

If you are in the spy business, you probably already know that the camera can be focused as close as 12 inches. So far as focus is concerned, photographing papers and documents in tight areas is relatively easy. But the maximum lens aperture of f/2.8 makes the really dim-light situations a little tough.

Despite its smallness (or perhaps because of it, and the resulting low inertia of the camera) shooting at slower than 1/60 sec can lead to lack of sharpness. And when you've got such small negatives, sharpness is essential.

Both the coupled meter and the viewfinder hood will slip off the camera body. Taking them off makes for less bulk. Of course, without the hood, seeing through the small viewfinder groundglass becomes more difficult, and you have to be pretty good at exposure-guessing without the meter. But it's simple to make bracketed exposures because the spring-wound, automatic film advance mechanism permits fast shooting. One disadvantage here, however, is that the cassettes will hold only enough film for about 20 exposures. When you bracket-shoot, you can use up that much film quickly.

The Tessina cassettes are made of thin plastic, and I found that I had some fogging troubles at first—at least until I learned to take seriously the manufacturer's advice about loading and unloading the camera in subdued light.

I have a Tessina cartridge loader (the manufacturer calls it a daylight selfloader for bulk film, but it accepts standard 35-mm cassettes—not bulk film), so reloading into them from standard 35-mm cassettes proved to be no trouble. If you intend to get into Tessina photography, I strongly advise you to get the loader for convenience.

Do-it-yourself darkroom people will have to get used to printing the negatives from the Tessina with the emulsion facing away from the sensitized surface of their printing papers. The internal reflex mirror of the camera causes the image to land on the film laterally correct—which, compared to the standard of other cameras, is wrong side around.

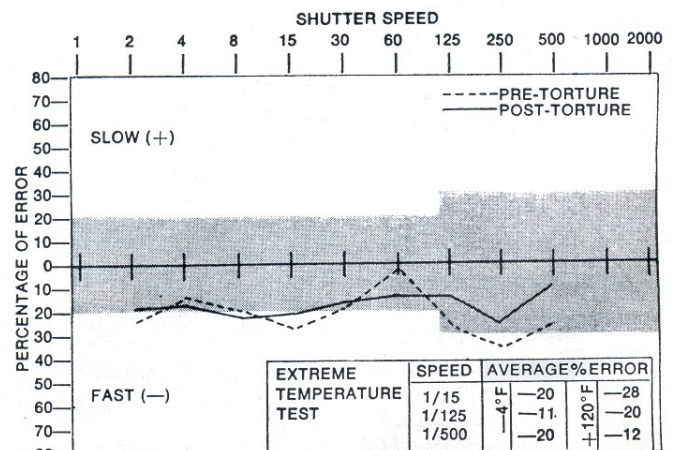
Having worked with this truly precise, tiny camera, I came away with the impression that the Tessina is potentially a serious piece of photo equipment. I would definitely choose the Tessina over the teenie-tiny format of most other subminiatures.—Harvey Zucker

INSTRUMENT READOUTS

CAMERA: TESSINA 35 No. 865643

LENS: 25-mm TESSINON F/2.8

SHUTTER PERFORMANCE: Most errors are within tolerances; since all are on fast side, they can easily be adjusted for accuracy.



Suggested USA (formerly ASA) shutter accuracy standards are shown by shaded area. Higher speeds have more tolerance.

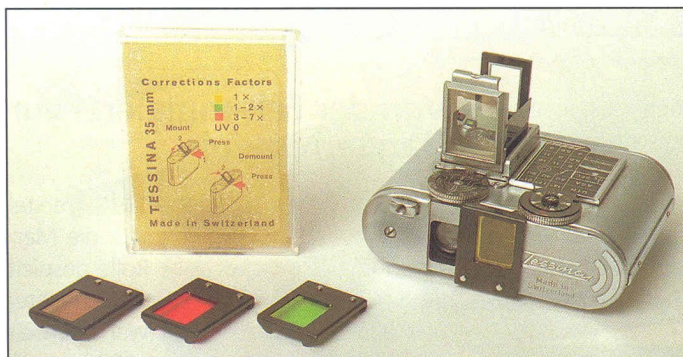


Der Tessina-Umspuler erlaubt das Auffüllen der Spezialkassetten mit Kleinbildfilm bei Tageslicht. Der Film wird geschnitten, indem der kleine Rädelsknopf bis zum Anschlag herausgezogen wird.

von bietet genügend Platz für Kamera und Pentaprisma oder Sucherlupe bzw. zwei Spezialkassetten.

Das ungewöhnlichste Zubehörteil für die Tessina war zweifellos eine aufsteckbare, mechanische Uhr mit 17 Steinen, sicherlich ein geschickter Rückgriff auf jenes Produkt, mit dem sich der Tessina-Hersteller eigentlich beschäftigte.

Nicht zuletzt wegen der vergleichsweise großen Zubehörpalette ist die Tessina ein beliebtes Sammlerstück. Dabei lassen sich allein von der Kamera verschiedene Variationen abgrenzen. Neben der Normalversion mit mattverchromtem Gehäuse gab es auch schwarze, rote und goldfarbene Ausführungen. Letztere sind auffallend selten und erzielen durchweg höhere Verkaufspreise (weit über 1000 DM). Bei schwarzen Kameras sollte man darauf achten, daß sogar Tessinas mit geräuscharmem Federwerk (Getrieberädchen aus Nylon) bzw. geräuschlos ohne Fe-

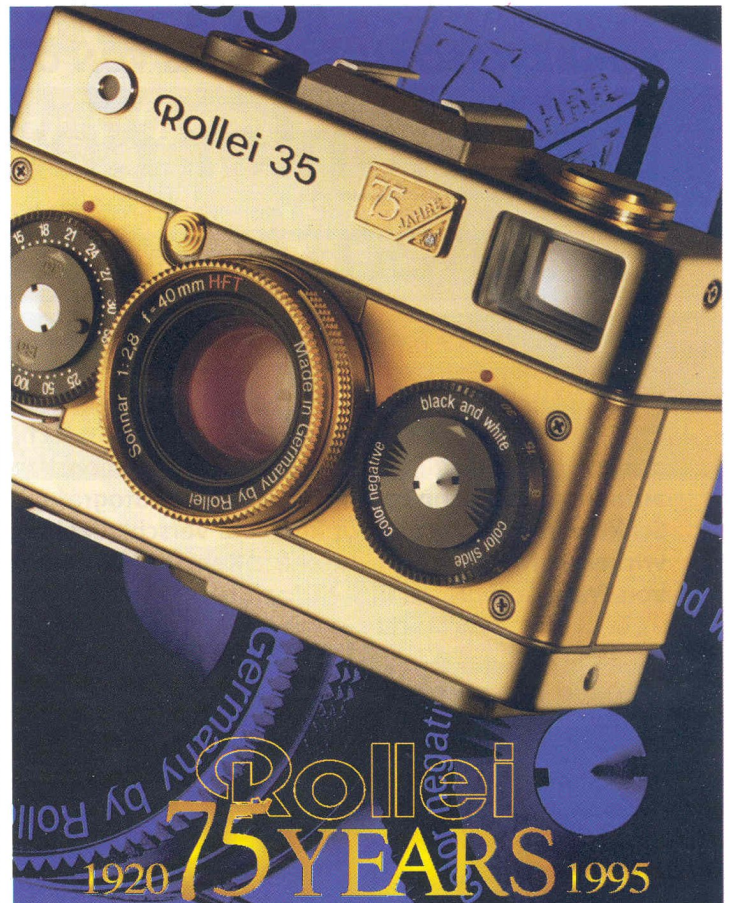


Die aufsteckbaren Korrekturfilter zur Tessina, bei vielen Anwendern und Sammlern noch weitgehend unbekannt. Angeboten wurden UV-, Gelb-, Grün-, Rot- und Konversionsfilter.

derwerk verfügbar waren. Nicht von ungefähr wurden gerade solche Ausführungen in der ganzen Welt zu Spionagezwecken eingesetzt. Bei vielen Kameras (vornehmlich mattverchromte von östlichen Geheimdiensten) sind die vorderen Schieber zur schnelleren Aufnahmebereitschaft entfernt worden.

Bei der frühen Tessina ist oberhalb der Schriftzug „Tessina automatic 35 mm“ eingepreßt, später findet man an dieser Stelle eine ovale Plakette mit dem hellen Aufdruck auf schwarzem Grund „Tessina 35“ und schließlich „Tessina L“. Übrigens gehörte zur letzteren Version normalerweise der aufschiebbarer Belichtungsmesser. Das Herstellungsland (Made in Switzerland) wird darüber hinaus bei früheren Kameras neben der Modellbezeichnung, anschließend jedoch auf dem Schieber angezeigt.

Hubert E. Heckmann



75 Jahre Rollei. 75 Jahre anspruchsvolle Fototechnik mit wegweisenden Geräteentwicklungen. Wie die Rollei 35. Ein feinmechanisches und optisches Meisterwerk. Seinerzeit der Welt kleinste Kleinbildkamera und buchstäblich um die Filmpatrone herum entwickelt. Ihre Kompaktheit begeisterte alle, die mit einer anspruchsvollen Kamera fotografieren wollten, sich aber weder mit Gewicht noch mit komplizierter Technik belasten mochten. Jetzt wird ihr ein ganz besonderes Denkmal gesetzt. Mit einer Jubiläums-Edition der aktuellen **Rollei 35 classic**. Ein Jahr lang Monat für Monat 75 hochwertig ausgestattete Kameras für die anspruchsvollen Rollei-Liebhaber in aller Welt. (Ebenfalls in einer auf 900 Exemplare begrenzten Jubiläums-Edition: die legendäre zweiäugige Rolleiflex.)

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