

The Concava Tessina Camera Jerry Friedman

There is only one thing clear about the original Tessina camera design; it was just about perfect. In fact, it is still in production and has been changed only superficially since its inception. Everything else remains layered in mystery. Paul Nagel, the designer of the Kodak Retina series as well as the Kodak and Nagel Pupille cameras, also designed the Tessina but did not produce it. Dr Rudolph Steineck, the designer and manufacturer of the Steineck ABC camera in Tützing, West Germany, directly after the war, subsequently moved to Lugano, Switzerland, where his company Concava S.A., began distribution of the Tessina which from 1961 was manufactured by Siegrist of Grenchen, Switzerland. How the mysterious Steineck came to own its plans is just one element of confusion surrounding both Steineck and the Tessina.

Ever since it first appeared in 1961 the Tessina has advertised itself as the only subminiature that made sense. Tessina ads in photo magazines showed its 35mm. film format next to a strip of Minox film and 16mm. film, then posed the simple question: which looks more reasonable to you? The Tessina advantage was obvious. Where the Minox negative was 8 x 11mm. and most other subminiatures made a 10 x 14mm. image on 16mm. film, the Tessina made a large 14 x 21mm. image on ordinary 35mm. film. At that time special film in cassettes and film processing was readily available for Minox, Mamiya, Ricoh, Minicord, Gami and other subminiature cameras. Thirty years later, when collecting cassettes is as important as collecting the cameras that use them, the Tessina advantage is even more obvious. The Tessina still uses standard 35mm. film loaded into special readily available Tessina cassettes.

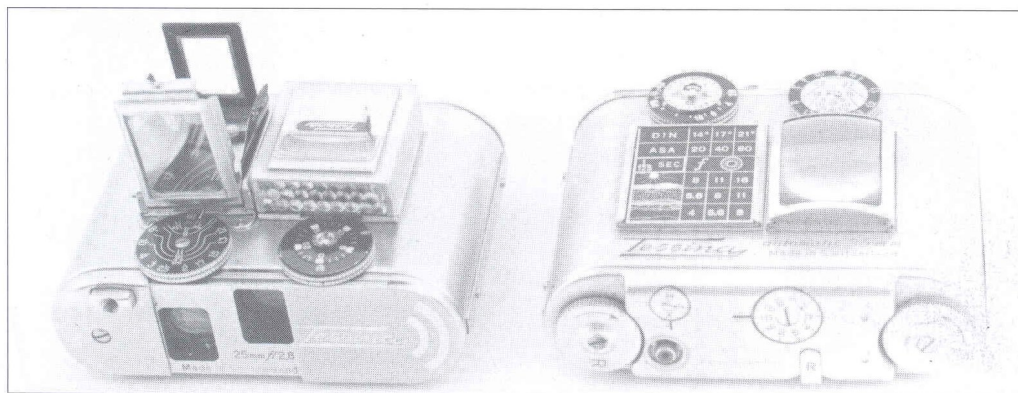
Reloading the Tessina cassette is simple because it is, after all, only a skinny version of the standard 35mm. cassette but with easy snap-on tops. Moreover, the people at Concava thoughtfully designed a very intelligent device which cuts and reloads 35mm. film directly from a standard cassette into the Tessina cassette - in full daylight, too! Most people, myself included, find it easier to cut a 16-18 inch length of film for 25 exposures from a bulk roll and load it into a

tessina cassette in a dark closet or darkroom.

Despite its very small size only $2\frac{3}{8} \times 2\frac{1}{4} \times \frac{3}{4}$ inches, the Tessina TLR offers the photographer every flexibility. The Tessar-type four element 25mm. Tessinon lens is made from high quality Lantham glass and has apertures from f/2.8 through to f/22, adjustable by turning the left of two small wheels on the top surface of the camera. The smaller round cover plate wheel counts exposures. The wheel to the right sets distance from less than twelve inches through infinity. This wheel cover plate lists complete depth of field for setting hyperfocal distances. Ground glass viewing is generally clear and easy, even at close distances where the proximity of the two lenses reduces the need for parallax adjustment. Focusing the very small ground glass is difficult, however, and it is easier to set the distance scale by estimate and depend upon the Tessina's extensive depth of field. Should peering at the small ground glass prove tiring several sliding viewfinders are available for the Tessina. The standard folding viewfinder is much like the old style four-sided twin lens reflex housing. Even if a little inconvenient to fold and then unfold, it provides adequate shade from extraneous light. Moreover, the front surface is a mirrored lens, like that on the Zeiss Ikon Contaflex TLR, which permits simply looking directly through it for viewfinder framing, or, holding it in front of yourself to see your own image reflected in the mirrored front panel for self portraits.

Other viewfinders may prove more convenient and more useful. The smooth field lens offers slight magnification but, most of all, keeps distracting light from bouncing off of the ground glass and needs no founding and unfolding. For more precision and definitely greater viewing comfort, the six power prism finder converts the small ground glass and presents an image similar to that found in SLR viewfinders, and with no mirror blackout. And if your needs include close detail work, like copying blueprints or photographing small objects with fine but important detail, the eight power tunnel magnifier makes focusing easy and precise, although the image is inverted left to right.

Both taking and viewing lenses are set deep within the body with the camera body providing a natural lens shade. A sliding front panel further protects both lenses from damage when the camera is not in use. The shutter button, threaded for a cable release, can be depressed only when both lenses are completely uncovered.



LEFT TO RIGHT: Tessina with pop-up viewfinder and meter; Tessina with field viewfinder and pictographic exposure guide.

A small totally flush-to-the-body wheel in the camera back sets the between-the-lens mechanism for B and 1/2 through 1/500 second. The camera is synchronised for both bulbs and electronic flash.

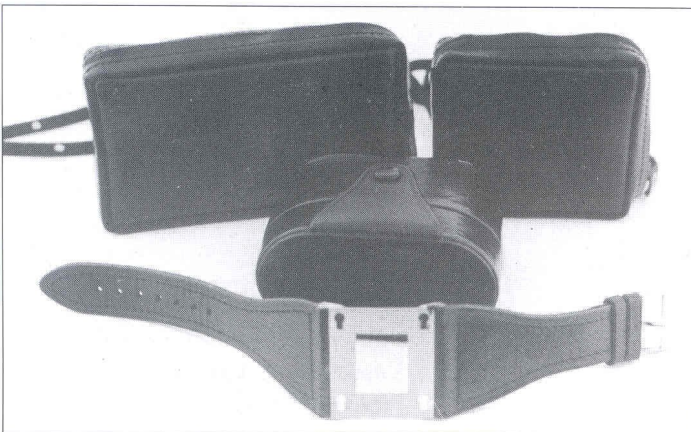
Loading the Tessina with film is much the same as loading any older non-quick loading camera with the exception that the spring motor will advance the film from five to eight and sometimes ten exposures per winding. The winding knob is on the back of the camera, directly opposite the rewinding knob, which does what it says after you lift the small rewind lever which frees the sprocket mechanism. Just like on a big camera.

Add to the above virtues the fact that this small marvel produces the largest image made by a true subminiature, and it is easy to understand why Tessina cameras are still in demand. If figuring square millimetres leaves you cross-eyed, just consider that this is a 1/3 frame image camera. For reference, the half-frame image produced by the gargantuan-by-comparison Olympus Pen, which represents the same surface space as four Tessina cameras is only 18 x 24mm.

A variety of Tessina accessories provide for even greater flexibility. In addition to a variety of black and white and UV filters which slip over the lens, several accessories slip into the two accessory shoes on the camera's top surface. These include a standard accessory shoe for mounting flash units, small exposure meters or whatever. The teeny-tiny Tessina exposure meter fits into the slot next to the viewfinder. This fine quality meter is adjustable for film speed and indicates proper exposure and then transfers it to the camera since the gearing on the exposure wheel and on the meter coincide. This meter is now quite rare and too expensive for daily use but a useful pictographic exposure guide also slides into the meter slot. It follows the sunny f/16 rule and is set for ISO 20, 40 and 80 films. I have found it quite useful since I use Tech Pan and rate it at about 25-50EI. I find that when using a shutter speed of 1/25 second, only three apertures, all pictured, must be kept in mind: f/8 for full sun, f/5.6 for cloudy bright and f/4 for dull. And if it is duller than that f/2.8 to be sure. Because I photograph general still life and nature scenes I have found little reason to carry an exposure meter. Should you feel less secure, purchase a small Minox meter which is inexpensive, tiny, accurate and can be used with all cameras. When not in use, the Tessina fits into one of several leather cases including a hard case with belt loop, and two small soft cases, one of which also has room for the pentaprism finder, or the small Minox meter, as well.

You do not even have to put the camera in your pocket if you are lucky enough to have found the wrist-watch type leather strap which permits mounting the camera on your wrist. And if you find that standard Tessina chrome exterior does not compliment your evening wear then there are models in red, gold and black. You can even mount a small watch in place of the meter/pictographic plate so that you know when to leave. And if you find the *bezeep, bezeep, bezeep* of the film wind motor a little distracting Tessina cameras with more polite (but more expensive) nylon gears are available. And for even greater

Tessina watchband, hard case, single soft case and large soft case for camera and pentaprism.



silence a (very expensive) motorless model with manual film advance will produce almost no noise at all. What this model lacks in automation many spies found that it made up for in silent operation. All Tessina accessories are well thought out. Indeed, even the cassettes are intelligent. The inner core of the take-up spool has sleeve side and two well placed sprocket teeth which catch the film and make taping the emulsion to the post unnecessary.

The original Tessina 35 Automat had MFX synchronisation while the later Tessina L offers only MX. The biggest difference between the two is that the aperture wheel of the Tessina L is more heavily grooved to engage the gears of the add-on Tessina light meter. Otherwise the Tessina 35 will take pictures every bit as good as those taken with a Tessina L.

Despite its many fine features the Tessina has its drawbacks. The camera has no tripod socket, not a small point for a device often used with a tripod. Fortunately a plate which slides onto four well made pins on the camera bottom surface with a socket is available. A nice long neckchain also connects to this plate if you wish to keep your camera around your neck. Also, getting used to the Tessina's small wheels takes a little practice, especially for big fingers. Adjustments may seem fussy but only at first. All cameras have their own handling characteristics and the Tessina is neither better nor worse than most. The one feature I would readily change is the collapsing viewfinder, less because it is inconvenient to close but because the sensitive spring will flip open in your pocket. And, of course, the Tessina has no interchangeable lenses. Because both lenses are so close together, however, it is easy to take pictures through binoculars and close-up lenses.

By this time it has probably occurred to you that since the camera is only half an inch (2 1/2 cm. approximately), it could not produce the negative size I have described. It does the seemingly impossible...with mirrors or, more precisely, with two mirrors. If you could break a Tessina in half as you might a dinner roll, you would have two side-by-side mirror mechanisms, each reflecting light in a different direction. The first mirror is set at forty-five degrees so that the image comes to the ground glass at ninety degrees from the viewing lens, just as with a Rolleiflex viewing lens. And directly next to this small upward reflecting mirror is another forty-five degree mirror which reflects light downward to the film plane which lies along the bottom of the camera. In other words, the Tessina is a double reflex or a regular TLR with the addition of a second mirror which reflects the light from the taking lens downward rather than merely passing it through to the film plane, as in a Rollei. Of course both mirrors are precisely

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Tessina accessory shoe tripod plate, chimney 8x viewfinder, pentaprism 6x finder, cassette and daylight loader.



experienced camera makers and had held his position since only shortly after the business was established. They went on to list the following cameras as being of their own manufacture: Minia, Tivoli, Standard, Pullman, Tablo, Arial and Record.

One further proposal for using the new capital was to stock photographic plates and papers for the first time.

Their Wafer plate cameras, introduced 1899, were very light-weight and compact models with a drop-front and pull-out lens panel. The quarter-plate No. 1 was the cheapest, the No. 2 having a longer extension and better lens. Both had reversing backs and could optionally be supplied with Levi's Pullman plate or film changing box. The Record was a twin-lens, box-form, reflex, introduced 1897. Offered in polished mahogany or walnut, it featured a full-size image seen on a screen in the top of the box-form body.

Another stroke of good fortune in our research was the survival of the documents of incorporation for Levi, Hones & Co., together with related papers, from the archives at the Public Record Office (only every fifth such file has been kept). In addition to listing the shareholders, these papers tell us that Walter Joseph Levi (optician) became the manager from 16 May 1898 and from October 1901 the directors were Walter Joseph Levi (above) and Lewis Joseph Levi (solicitor), the latter replacing A. J. Jones who retired from his position. A letter dated 1 November 1905 states that the company had not traded for over twelve months and on 14 November 1905 the Receiver seized and realised the assets on behalf of the debenture holders.

Why the business failed we have been unable to determine but on 7 Mar 1907 it was officially dissolved.

We mentioned in our introductory remarks that this story has subsequent connections with two other photographic companies and one of these was the takeover of Joseph Levi & Co., by Houghtons, which has already been noted. The second centres on Mr C. Garner who spent the first few years of a career spanning nearly sixty years in the photographic industry with Joseph Levi & Co., at Hatton Garden. In the 1890s he joined W. Butcher & Son of Blackheath, which in 1907 became a limited company incorporating Charles Tylar and England Brothers, and remained with them through the amalgamation with Houghtons Ltd until 1926 when he took the Ica agency. This led to the formation of Garner & Peeling in 1927 to market the products of the new Zeiss Ikon combine of German companies. However, when Zeiss Ikon Ltd was formed in the UK, Mr R. E. Peeling joined them as managing director and Mr C. Garner formed, with Alec Jones, Jones & Garner Ltd to handle Ihagee and, later, Plaubel and Schneider products in the UK.

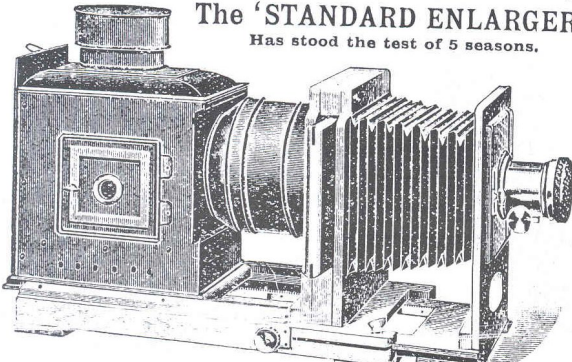
From the 1901 British Journal Photographic Almanac.

1310 THE BRITISH JOURNAL ALMANAC ADVERTISEMENTS

LEVI, JONES & CO., LTD.
 29 HOXTON SQUARE, OLD STREET, LONDON, N.
 BONA-FIDE MANUFACTURERS OF Late of 71 Farringdon Road,

CAMERAS, LANTERNS, * * *
 * * * and the **Stadagraph, &c.**
 Dealers all over the World should write for our Catalogues. To the Trade only.

The 'STANDARD ENLARGER'
 Has stood the test of 5 seasons.



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the proper size and and shape to reflect a perfectly non-distorted image at both ends of the ground glass on top, and film plane below.

To understand how truly small the Tessina is, consider how tiny it could have been had its designers wished to use a different film size. Theoretically, had the Tessina used 16mm. film to produce a 10 x 12mm. image, the camera's overall dimensions could have been one half what they are. Moreover, sprocketed 16mm. film was, and is, readily available. Indeed, the camera could have been even smaller. While sprocketed 9.5mm. Minox film is not available 8mm. film is sprocketed and could have resulted in a camera which produced a small 6 x 9mm. or 6 x 10mm. sized negative but in a camera about an inch square! Of course, in the latter cases the camera would have a *really* minuscule viewing ground glass and *really* tiny wheels for setting aperture and distance. In short, the camera could be made that small but at the price of usability. Making it as 'huge' as it is, so that it takes standard 35mm. film has resulted in a very small camera with a bigger camera negative.

For the serious subminiature photographer the Minox is the Tessina's only serious competition. And yet, the two cameras have very different personalities. Compared with the Minox the Tessina offers far greater exposure control, flexibility and, as an added benefit, the Tessina presents a 294mm. square negative, over three and a half times larger than the 88mm. square Minox negative. Yet despite these advantages many subminiature users report being disappointed with the Tessina's results while far fewer seem unhappy with the results they get from the far smaller Minox camera. I believe this may be the case because the Tessina can be fidgety and difficult to hold by those not used to the camera. Also, because the Tessina is a more delicate instrument the lens to mirror to film plane alignment of many older Tessina cameras may require adjustment. The Minox, by contrast, fits the hand very nicely and are far more durable. Also, the Minox is easier and faster to use, is beautifully well built and durable. You can probably hand hold a Minox at much lower shutter speeds. There is one thing, however, the Tessina can do that no Minox can do well: take really fine colour pictures or slides which can be processed by any corner store or one-hour processing lab, and for just a little more than the standard bill of fare.

New Tessina cameras are custom built, cost the earth and are subject to an average back order delay of about one year. Used Tessina cameras are readily available, if expensive, and they may require servicing for optimal performance. Those photographers willing to adjust to the Tessina's peculiarities and learn how to use the camera to best advantage will find that it is capable of the most demanding work and the pleasant general scenery pictures, and all on an easily available film. Anyway, did you ever try to wear a Retina on your wrist?

Photographica World

REVISION OF COPY DATES AND PUBLICATION DATES

In order to meet the increased demands on editorial time and to accommodate the needs of the printers the copy and publication dates for 1996 will be:

Issue	Copy Date	Publication
No. 76 March	1 February	6 March
No. 77 June	1 May	15 June
No. 78 September	1 August	15 September
No. 79 December	1 November	15 December

Material should be received in advance of the copy date