Beseler Topcon Auto 100

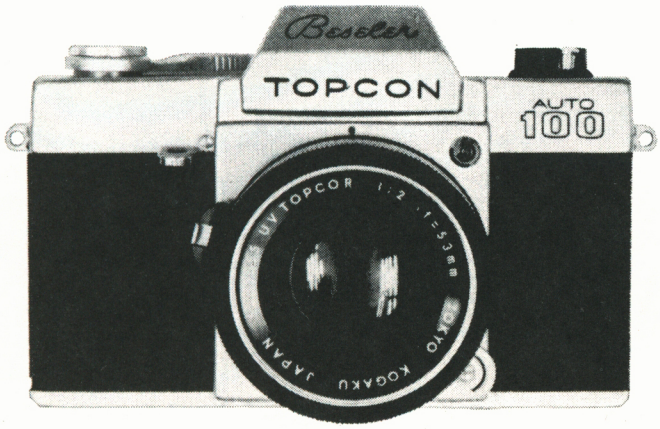
Proof of Performance

1. David B. Eisendrath Jr.'s Field Check for Popular Photography
2. Technical Manual produced by the Department of the Army

LAB REPORT

For an explanation of the various laboratory tests, see the March 1968 issue

TOPCON AUTO 100



SPECIFICATIONS

CAMERA TYPE: 35-mm SLR, **NORMAL LENS:** 53-mm UV Topcor *f*/2 with auto diaphragm; stops to *f*/22, focuses to 24 in. **SHUTTER:** Seikosha SLV behind-lens iris type, B, 1-1/500. **VIEWFINDER:** fixed, eye-level pentaprism; 0.75X image with standard lens, Fresnel screen, microprism focusing spot. **EXPOSURE METER:** through-lens CdS, settings visible in finder. **FLASH SYNCHRONIZATION:** M and X at all speeds; V for self-timer. **FILM TRANSPORT:** one-stroke winding and shutter/lens reset; built-in rewind. **FILM COUNTER:** automatic. **WEIGHT:** 30 ozs. **DIMENSIONS:** D.-3½ in., H.-3¾ in., W.-5½ in. **ACCESSORIES:** 35-mm wide-angle, 100- and 200-mm tele lenses. **PRICE:** $159. **DISTRIBUTOR:** Chas. Beseler Co., East Orange, N.J. 07018.

Shutter performance. All speeds with the exception of the highest are within suggested USASI standards. Half of the other 35-mm cameras lab-tested to date have had top speeds that did not meet these proposed standards.

Noise level. The Auto 100 falls into that broad category that has to be considered "average." Of the "average" cameras, however, it has a somewhat high level of noisiness.

Vibration level. Of the 35-mm SLR's lab-tested, the Auto 100 has one of the highest vibration levels to be recorded.

Shutter trip and travel. A trip force over 300 grams in excess of the mean established to date by lab-tested 35mm's, but trip travel within a millimeter of the mean, add up to a stiff but workable release.

FIELD CHECK

There are several ways to measure exposure with a camera, but a good through-the-lens system affords some unique advantages: you can be sure you are measuring what the camera sees; you are measuring the illumination up to the instant of exposure; there is great convenience and simplicity in being sure that camera settings are properly made. And, of the several systems for through-the-lens measuring, the Topcon method of making an overall integrated reading from the meter-behind-the-mirror has proven itself to be highly dependable, accurate, and very easy to use.

The Beseler Topcon Auto 100 is a simpler, less expensive little brother of the Super-D. It might be called a "family camera," for it has automatic features permitting a simple aim-and-shoot technique. Yet they can be easily overridden by the more experienced photographer who may want to adjust exposures. For its price and class, the Topcon Auto 100 has a lot of plus features going for it. Probably one of the most outstanding is its standard lens, a six-element 53-mm UV Topcor *f*/2 optic with excellent characteristics. I was particularly impressed with the contrast and sharpness in the tests I made.

Featuring a Seikosha SLV behind-the-lens blade shutter with speeds ranging from a full second (and B) to 1/500 and an extremely rapid mirror return, the camera performs beautifully and has a really professional "feel." There are a number of features that were especially attractive to me, such as the single-stroke (180-degree) film-winding lever that also operates the shutter advance and automatic lens diaphragm mechanisms, and the direct viewing of the *f*-stop indicator at the edge of the bright viewing screen. I also liked having the accessory shoe mounted on top of the viewer housing, in line with the lens (where it should be).

I'm pleased to report that the Beseler Topcon Auto 100 can be used easily when you're wearing heavy gloves or mittens. Even the safety lock that opens the back for film changing can be opened by gloved hands easily when necessary, but not accidentally.

The automatic exposure feature worked well under a broad range of brightness and contrast conditions. It is interesting to note that the light measuring, done over the entire image, is designed to read more from the foreground than from the sky when horizontal scenes are shot. Reading too much sky has traditionally been a problem in designing automatic exposure features into a camera; on the Topcon Auto 100 there is no need to tip the camera down to get an accurate reading.

On the other hand, if you want to use the automatic feature and still "fudge" a little, you can take a reading of, say, a shadow area and by pushing down the release lever only part way, feed that information into the automatic diaphragm setting mechanism, before reframing.

There are a few minor features that help make this a desirable camera for the family: self-timer on the shutter so you can get into pictures yourself, a neat fold-away rewind crank that makes for faster and easier film changes, knobs for lens and shutter adjustment that are placed in the right position for comfortable operation.

I had no chance to test the wide-angle (35-mm *f*/3.5) or telephoto lenses (100-mm *f*/4, 135-mm *f*/4, 200-mm *f*/4) offered for this camera, but must note they come from a fine family and are of excellent design. I have some criticisms, but the faults are slight: on the model we tested, the ASA index scale went only to 400 ASA although with the normal lens, compensation can be made for two steps more (1,600 ASA). The viewfinder and focusing screen that features both Fresnel and microprism. masks the corners slightly for users wearing glasses, although not as badly as many other cameras.

On any modern equipment utilizing miniature mercury batteries, I feel that a battery-check feature is important; and I wish this excellent camera included one. Also, when manual, non-automatic exposure settings are made, I would be happier if the click-stop mechanism made it easier to set half-stops.

By and large, however, I feel that this is a well-designed camera with excellent optics. Almost foolproof for the amateur or lazy photographer who wants merely to point and shoot, it is capable of quality performance under a great variety of conditions in the hands of the more experienced. The dependability of the exposure system and high quality of the lenses make it an excellent buy.

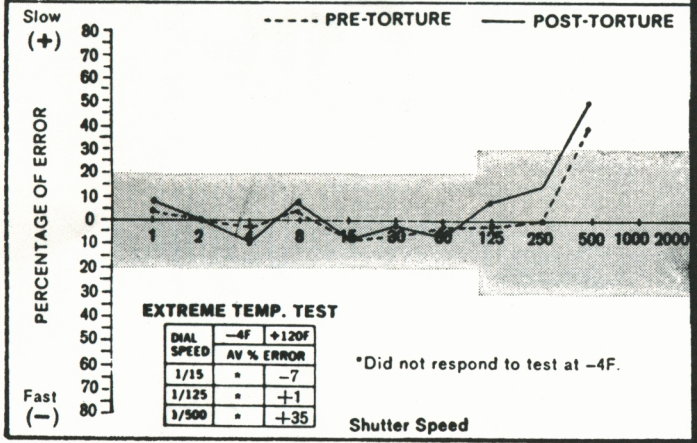
—David B. Eisendrath, Jr.

INSTRUMENT READOUTS

CAMERA: *Topcon Auto 100* *#5476973*

LENS: *53mm UV Topcor* *#5465555*

SHUTTER PERFORMANCE



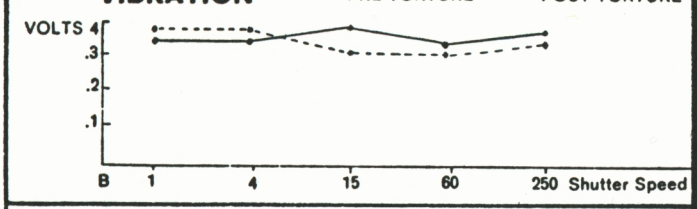
EXTREME TEMP. TEST

DIAL SPEED	−4F	+120F
	AV % ERROR	
1/15	*	−7
1/125	*	+1
1/500	*	+35

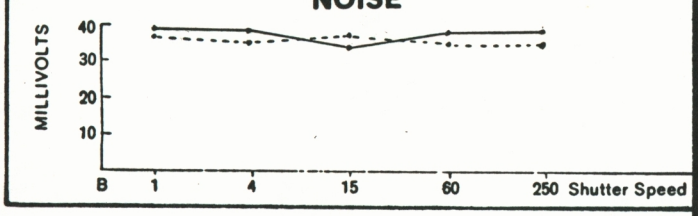
*Did not respond to test at −4F.

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

VIBRATION



NOISE



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

MISCELLANEOUS DATA

FUNCTION	PRE-TORTURE			POST-TORTURE		
FOCUSING SYSTEM *SLR, w/ ground glass and microprism*						
Range:	*27"—∞*			*27"—∞*		
Accuracy over range:	∞	5M	1M	∞	5M	1M
	OK	*OK*	*OK*	*OK*	*OK*	*OK*
SHUTTER-TRIP FORCE:	*694 gm*			*755 gm*		
SHUTTER-TRIP TRAVEL:	*3 mm*			*3 mm*		
SELF-TIMER:	*One delay time only:*					
	10 sec.			*10 sec.*		
VIEWFINDER *Eye-level pentaprism*						
Framing Accuracy:	*Fair*			*Fair*		
Parallax Corrected:	—			—		
SYNCHRONIZATION *PC outlet*						
Flashbulb:	*16 msec.@1/60*			*16 msec.@1/60*		
Strobe:	*0 msec.*			*0 msec.*		
Contact Resist:	*0.2 Ω*			*0.1 Ω*		
Insulation:	*OK*			*OK*		

RESOLUTION

S=SAGITTAL T=TANGENTIAL

CENTRAL 1/4 OUT HIGH CONTRAST f/	L/mm S	L/mm T	2/3 OUT HIGH CONTRAST f/	L/mm S	L/mm T	CORNER HIGH CONTRAST f/	L/mm S	L/mm T
1.4			1.4			1.4		
1.8			1.8			1.8		
2	40	40	2	28	12	2	12	17
2.8	56	56	2.8	34	24	2.8	14	17
4	68	68	4	40	34	4	20	34
5.6	80	80	5.6	48	56	5.6	24	48
8	80	80	8	56	68	8	34	56
11	68	68	11	68	68	11	48	56
16	56	56	16	56	56	16	48	56
22	48	48	22	48	48	22	48	48
32			32			32		
LOW CONTRAST			**LOW CONTRAST**			**LOW CONTRAST**		
1.4			1.4			1.4		
1.8			1.8			1.8		
2	24	24	2	14	12	2	12	14
2.8	34	34	2.8	20	17	2.8	12	14
4	48	48	4	24	28	4	17	20
5.6	56	56	5.6	34	40	5.6	24	34
8	48	48	8	40	40	8	28	34
11	48	48	11	40	40	11	34	40
16	40	40	16	34	40	16	34	40
22	34	34	22	34	34	22	34	34
32			32			32		

METER SPECIFICATIONS

Type: *Behind-mirror CdS* | **Zeroing provision:** *None*

Accuracy: *Within 1 stop (entire range)*

ASA range: *25-400* | **Parallax:** *None*

Acceptance angle: *Same as lens* | **Battery test:** *None*

Response discrimination: *Good*

Accessories: *None* | **Scale legibility:** *Good*

Movement balance in various positions: *Good*

STRIPDOWN REPORT

	Int.	Ext.	
Material choice:	*Good*	*Good*	**Adjustment provision:** *Good*
Assembly, Finish:	*Good*	*Good*	

Repair access: *Good* | **Modular construction?** *Yes*

Seal against dirt: *Fair* | **Replace key parts easily?** *Yes*

Can frequently made adjustments be made without major stripdown? *Yes*

Comments:

Shutter design derives from current Compur (with changes); quite well made. Unusual in that it is normally open, closing as the mirror begins to move upward and again to complete the exposure as the mirror begins to fall. With mirror and baffle door cap in place, it reopens and stays open. Provision for adjustment of mirror angle was exceptionally good.

Attachment of the tripod socket (by three small, shallow-threaded brass screws) to the bottom plate was weak. The unsealed exposure meter could jam if dirt gets into it. This is possible, although the Auto 100 has one of the better sealed SLR top covers.

Conclusion: Uncluttered design, sturdy parts, no compromise in choice of internal materials. Since large parts demand more force to move them, camera action is somewhat less smooth than another design approach might have produced. But large components stand up under hard use.

—N. Goldberg

The U.S. Army set includes camera, 35mm, 53mm, 135mm lenses, filters, hoods, flash gun and fitted case.

TM 11-6720-238-15

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

ORGANIZATIONAL, DS, GS, AND DEPOT MAINTENANCE MANUAL

CAMERA SET, STILL PICTURE TOPCON AUTO 100

HEADQUARTERS, DEPARTMENT OF THE ARMY

JULY 1967

Exact replica of cover of official manual.