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ZEISS FIELD GLASSES



T 380 £

WM. BLACKADDER

OPTICIAN AND

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Tourists on the Gornergrat (10,350 ft.) near Zermatt, Switzerland.
After a drawing by R. Lipus, published with the kind permission of the Leipzig Illustrierte Zeitung.

ZEISS

FIELD GLASSES



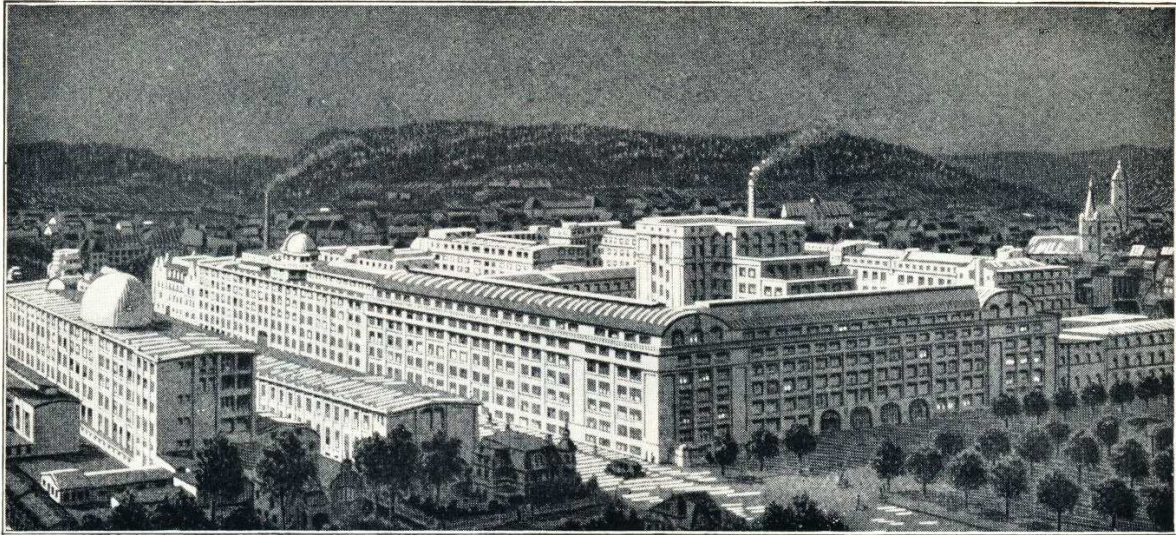
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T 380 £



CARL ZEISS, JENA 1928

Established 1846
About 5000 employees

ZEISS Field Glasses may be obtained at the makers' published list prices from all reputed dealers in optical goods.

The illustrations contained in this catalogue do not necessarily conform in every detail to the actual construction of the instruments, and, similarly, the particulars of weights given in the list are subject to slight variations. The illustrations and text of this catalogue may not be reproduced without our express consent. For the purpose of illustrating publications we shall be pleased to provide the requisite electros.

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*'Tis distance lends enchantment to the view,
And robes the mountains in its azure blue.*



But in that azure blue lie hidden wonders that only your Zeiss glass can reveal to you. Armed with it, seated in your touring car, from the deck of the pleasure steamer, from the window of your hotel, or from the height of an aeroplane you can change the charm of distance into the delight of nearness. Thus the rewards of your journeys may be increased a hundredfold. There is a wonderful charm about a clear and detailed view of a distant town with its steeples and roofs, and from your favoured high position your glass will disclose to you the silent beauty of the surrounding verdure clad plain with its glistening silver streaks of rivers and brooks. Fortunate indeed are you if, sailing through the Fjords, past the coast of Scotland or the shores of the Mediterranean, you may feast in seeming nearness upon the sight of forest-clad mountains, snow-capped peaks glittering in the sun, and the geometrical poetry of Alpine ridges; for all the great architectural beauty of the earth and hazy sketches of man's greater structures and his habitations your Zeiss glass is able to bring into clearer perspective.

Your Zeiss glass will also give you thrilling peeps into many secrets of nature, which is no small matter, since nature is exceedingly coy and instils into her creatures the necessity of being wary. The possession of the right kind of Zeiss field glass may immensely add to the contents of your life by enabling you to watch the habits of the wild dwellers of the wood. For hours your eye may visit deer and wood pigeon in seemingly close familiarity, whilst without your glass the chapter of this tale would be hopelessly closed to you. You may render yourself intimately acquainted with the habits of the woodpecker, the kingfisher and thrush, the flying feats of the buzzards and seagulls and the dives of hawks and falcons. Even the approach of twilight will not hinder you from studying the doings of the animal world, and still later in the night the Zeiss glass will help you to become familiar with the general appearance of the moon in its successive phases and the features of its face.

Our eyes are by nature insatiable, and in the absence of an appropriate aid they will strain their resources to the utmost. High up in the blue sky they see something which experience proclaims to be an aeroplane, though it may seem little larger than a bird. With a Zeiss glass in your hands you see at once without effort that it is a biplane, and you may even recognise its particular type as well as its name and number. From the sea coast you

may see a thick beam on the horizon followed by a streak of smoke. You know it to be a steamer, for the sight is familiar to you, but that is all. Looking through your Zeiss glasses, however, you recognise colours and the pennant, and you may even distinguish the captain on the bridge.

Perhaps nowhere is the disparity between the user of a Zeiss glass and his less fortunate associate better illustrated than on the race-course. Whereas the former has a clear view of the field and can note quickly and distinctly the colours of the jockeys, and especially, having regard to the wide angle of view of the Zeiss, the positions and indeed all the incidents immediately following the fall of the flag—so vital a point to the turf enthusiast—the person who is restricted to the use of his unaided eyes usually sees but a jumble of equally struggling horses and jockeys and so is left ignorant of the earliest and possibly the most important fortunes of the race.

During boat races and yacht races no detail is lost to the watcher through a Zeiss binocular. Every stroke of the oars, every manoeuvre or fault of the yachtsmen can be followed, and distances can be differentiated with far greater precision than the unaided eyes can do. In these days where the sports grounds and their seating and standing accommodation have attained an enormous size a spectator without a Zeiss glass is at a great disadvantage, even if he happens to occupy the best of favoured places, for the most interesting events do not always occur in front of the best and dearest places. Extraordinarily interesting things may happen in the remotest part of the ground, and that is the time for exulting in the possession of a Zeiss glass.

In these days of fast travelling and fast changing scenes the binocular has acquired quite a different significance from that accorded to it in the old days when every scene was leisurely viewed at close range. The motorist is no longer inclined, or able for that matter, to approach all the objects of interest which he swiftly passes in rapid succession. They are too many, and he needs must gap the distance with the aid of an optical eye. That optical eye *par excellence* is the Zeiss binocular. Not only that, when travelling through unknown country there is nothing like the field glass to give the way-map its full value as a way-finder, and in this respect it is no less indispensable to the long distance wanderer to enable him to pick up his landmarks. A hunter without a field glass is simply unthinkable, and an explorer without it is a myth. Then there is the endless list of its professional uses. We need only mention the foresters, gamekeepers, coast-guards, Alpine life saving stations, railway and telegraph line inspectors, excise officers, flying men, sea captains, army and navy officers, and scores of others.

And all these many varied duties are performed by the field glass in return for one single purchase, for, treated with reasonable care, the glass remains permanently ready for service throughout a lifetime.

The only condition, of course, is that it should be an exceptionally good glass, and it is here where the name of Zeiss provides the necessary assurance.



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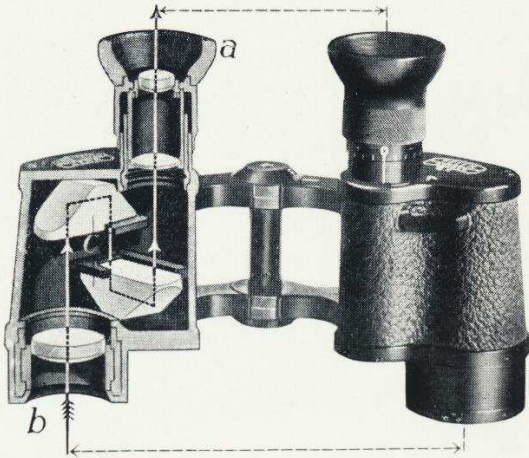
Des moments de plaisir, et de jours de tourmens De notre être imparfait voilà les elemens

Old Venetian print, end of the 18th century, after a painting by Fr. Maggiotto.

HISTORICAL NOTE

THE first telescope dates back to the beginning of the 17th century. Its invention is ascribed to the spectacle grinder JOHANN LIPPERHEY, of Middleburg, who produced it in 1608, whereas GALILEO, inspired by the news which reached him from Holland, devised a telescope for himself a year later, employing it subsequently successfully for his researches in astronomy. This explains why the telescopes of simplest type are to this day called Dutch telescopes or Galilean telescopes. It was not until 1823 that these telescopes became general in their binocular form. Despite the improvements which the Galilean binoculars experienced in the course of time by the combined use of different kinds of glass for the purpose of improving the chromatic defects, their use remained restricted to low magnifications, as otherwise their inherent optical defects become too pronounced. They are accordingly still used in the form of opera glasses magnifying 2 to 3 times, whereas the use of glasses of this type with magnifications of 3 to 5, which were extensively used in the Crimean war, has now very much declined so that one rarely meets with them. This is due to the fact that in 1893 Prof. ERNST ABBE of the Zeiss Works at Jena created the so-called prism binocular, which from that time onwards has advanced victoriously through the world.

THE DESIGN OF THE ZEISS FIELD GLASSES



Course of the rays through a Zeiss prism glass
a) Eyepiece b) Objective c) Prism

The prism glass has, after the manner of astronomical telescopes, a large binary lens (made up of two cemented lenses), which forms the objective or object glass, through which the light enters, and a set of three to five partly cemented eyepiece lenses for either eye. The light which is transmitted from the objective to the eyepiece has to travel a comparatively long distance, that is, the two components are optically wide apart. The combination as such furnishes inverted images. To the astronomer observing celestial objects this is an unimportant matter to which he has become

accustomed. When viewing objects on the earth it would be intolerable to see everything upside down and right and left reversed. As the name "prism glasses" indicates, one or two prisms are interposed in the path of the rays, whereby the image is erected by multiple reflection, while at the same time the otherwise long instrument is folded upon itself, as it were, so as to form a short and handy instrument.

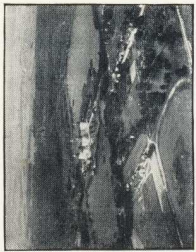
The prisms are in the main of the PORRO type, as represented in the appended picture. The name of these prisms originates from an Italian engineer named I. PORRO, who in 1850 introduced in Paris prism telescopes. Since, however, the crown glass in those days was not so pure as was desirable, it came about that these telescopes, which moreover were exclusively made in the form of single-tube instruments, never established themselves to any considerable extent. The great merit of ABBE was that in 1893 he introduced an exceptionally clear type of prism crown glass and that he arranged the whole combination in the form of a double telescope with the object glasses farther apart than the eyes. In addition to these PORRO prisms, other prism combinations are employed in the construction of certain Zeiss models, partly for the purpose of obtaining an exceptionally flat and compact form and partly for other reasons.

THE ADVANTAGES OF THE PRISM GLASSES

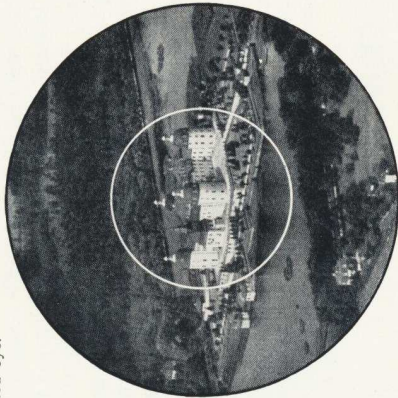
OVER THE GALILEAN GLASSES ARE
MANIFOLD. THE MAGNIFICATION

may be carried much further than is possible in the Galilean telescope. The most popular Zeiss field glasses magnify 6 to 8 times and at the same time are of a very handy form and comparatively light. As will be seen on the succeeding pages, there are, however, Zeiss glasses with higher magnifying powers up to 18 times.

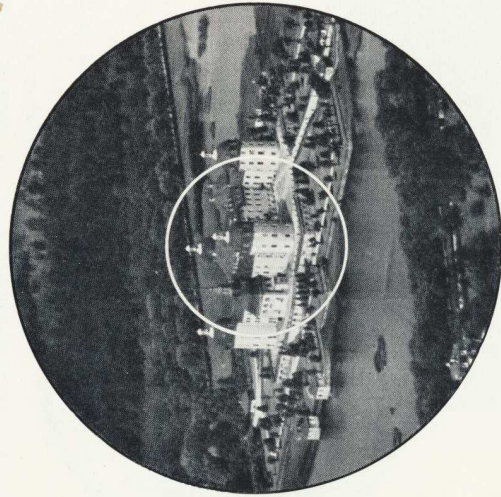
PLATE SHOWING THE FIELDS OF VIEW



Air view of the Moritzburg Castle near Dresden as seen with the unaided eye.



Zeiss Field Glass "Turolem", magnifying 4 times.



"Telex", "Telexem", "Silvamar", and "Silvarem", magnifying 6 times.

The large circular areas represent the fields of view of the respective Zeiss Field Glasses as they appear to the eye. The areas within the small inscribed circles represent the fields of view of a Galilean glass of equivalent magnification.

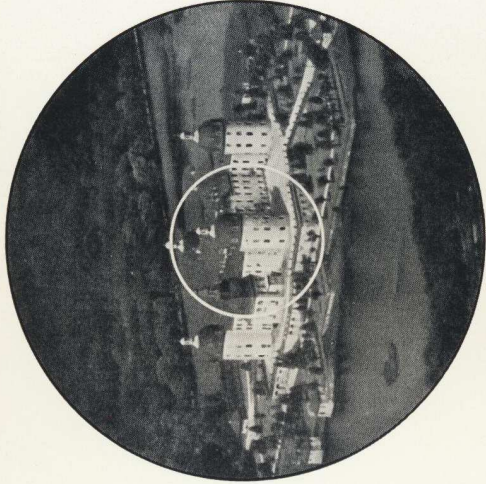
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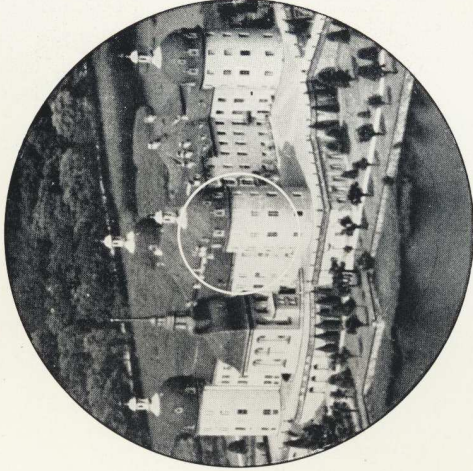
Small, inner circle (white): The field of view of the ordinary non-prismatic glass, magnifying 8 times.

Middle circle (black): The field of view of a prism field glass, magnifying 8 times, such as "Turact", and "Turactem".

The whole: The field of view of the Zeiss *Wide-angle* Field Glasses, magnifying 8 times: "Delturis", "Delturitem", "Deltrentis", "Deltrintem", and "Delactis".



Zeiss Field Glass "Binocular", magnifying 7 times.



Zeiss Field Glass "Telonar", magnifying 12 times.

THE FIELD OF VIEW

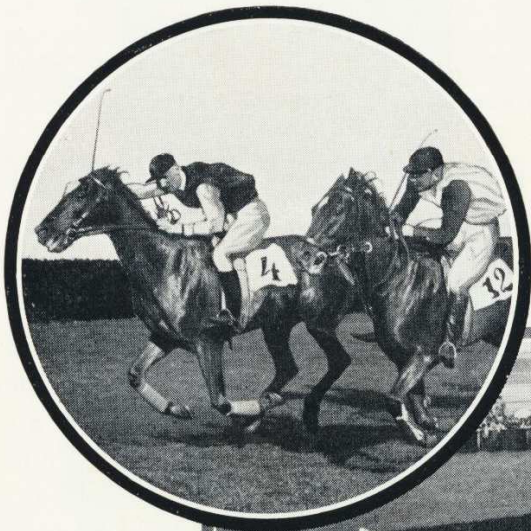
is very much larger. The superiority of the Zeiss field glass in this respect can be seen from the table of fields of view appended to this catalogue. Whereas a Galilean glass magnifying five times embraces only a field of view of about 60 yards at a distance of 1000 yards, a Zeiss Telex glass or the Silvamar glass magnifying 6 times embraces a field of view of 150 yards at a like distance. The larger field of view not only affords in itself a greatly enhanced enjoyment but has the additional advantage that it facilitates the process of getting into view certain points in the landscape, and of picking up and following rapidly moving objects, for instance on the race course, on sports grounds, while hunting, when watching or engaged in flying operations, etc.

WIDE-ANGLE FIELD GLASSES

A still further enlargement of the field of view was achieved in 1917, when H. ERFLE, a member of the scientific staff at the Zeiss Works, devised the so-called wide-angle field glasses, which are equipped with patented eyepieces embracing a view angle of 70° . The field of view of a wide-angle field glass of this type magnifying 8 times equals that which previous to its introduction was attainable only in glasses magnifying 6 times at most. (See the plate of fields of view.)

ENHANCED PLASTIC EFFECT

The amenities of binocular seeing are thereby considerably accentuated by the design of the Zeiss binocular owing to the circumstance that in the majority of the Zeiss glasses the objectives are set farther apart than the eyepieces. This is apparent in the illustration on page 6 showing the course of the rays. The eyes of a person looking through such a binocular are thereby drawn a greater distance apart, as it were, in consequence of which even objects situated at a great distance stand out better from their background, so that it becomes easier to appreciate



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differences in depth. In the so-called shear-jointed telescopes and the range finders the resulting enhanced plastic effect is turned to account for military purposes.

LIGHT-TRANSMITTING CAPACITY

Owing to the fact that the prism field glasses contain a much greater mass of glass than the older type it follows that the idea as a whole became practicable only after the Jena Glass Works of SCHOTT & CO. had succeeded in producing various kinds of glass of such light-transmitting qualities as to practically let the whole of the light pass through with unweakened intensity. An insignificantly small loss of light is occasioned by the reflection of a small portion of the light at the lens and prism surfaces as the rays traverse the optical system. On the other hand, the intensity of the light is uniformly distributed over the entire large field of view of the prism glass, whereas in the Galilean type it is only the middle portion which presents its full intensity, and this rapidly declines towards the boundary.

For the purpose of making comparisons the light-transmitting capacity of a telescope is denoted numerically by the square of the diameter of the exit pupil of the instrument expressed in millimetres. In the catalogue both this number and the diameter of the exit pupil are stated as part of the particulars given for each glass. By holding a field glass at a distance of about eight inches in front of the eye and turning the object glasses towards the bright sky you will see in the eyepiece the reduced image of the object glass in the form of a small bright circle. This is the exit pupil in question. The exit pupil is, in fact, the cross-section of the pencil of rays which emerges from the eyepiece and enters the eye through its pupil.

In the daytime the human pupil is very small, being only a few millimetres in diameter. In bright daylight many persons fail, therefore, to be particularly struck with the difference between the light-transmitting quality of the different grades of field glasses. The conditions are, however, entirely different in the twilight and at night, where the difference becomes at once so striking that no one can fail to fully appreciate it, since the pupil is then much larger. The glass having a larger exit pupil is then capable of transmitting much more light into the pupil of the eye than those glasses which are primarily designed for use in daylight.

The performance of a field glass in the twilight and at night is governed, apart from the size of its exit pupil, by its magnifying power. A greater magnifying power has the effect of resolving to a greater extent the details of distant objects, so that these may be more distinctly recognised in deep dusk than is practicable with a glass of lower power, perhaps even where it happens to have a higher light-transmitting capacity.

SUPERB DEFINITION

Obviously the complicated make-up of a prism binocular makes much more exacting demands upon its manufacture than is the case with the older glasses made up of lenses only. Inaccuracies in a binocular with reflecting prisms occasion a far more pronounced deterioration of the image than is the case with the simpler type. In the Zeiss Works, which were the first to make prism binoculars, these difficulties were fully recognised at an early date, and extensive provisions were devised to overcome them. It is solely owing to the superb quality of the images seen through a Zeiss binocular, even in these days after the expiration of the protection granted to the inventor and the disappearance of the advantage of being first in the field, that the Zeiss field glass still leads throughout the world and is universally acknowledged to be unsurpassed in its quality.

BIBLIOGRAPHY: Auerbach, "The Zeiss Works and the Carl Zeiss Foundation at Jena", London, W. & G. Foyle Ltd.





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ON THE CHOICE AND USE OF A ZEISS FIELD GLASS

At the sight of our list a feeling akin to *embarras de richesse* may seize the reader, and he may find it beyond him to decide on a glass best suiting his needs. Hunters, mountaineers, playgoers, sea captains and airmen, all have their special requirements, and it would be hopeless to attempt to embody all their needs in one single model. In the following pages each instrument will be found described by its salient features and range of uses, which should prove helpful in arriving at a choice.



The Zeiss Field Glasses specified in this catalogue are grouped under five heads:



1. MINIATURE PRISM GLASSES

These are very small and light glasses of a flat shape giving magnifications ranging from 5 to 8. They are mainly intended for travelling and are in special favour with ladies and all those who attach particular value to a minimum of weight and who wish to carry their glass in their coat pocket or even in their waistcoat pocket. Their flat form is rendered practicable by the use of special prisms. Also, the smaller number of lens and prism surfaces which require to be traversed by the light render the conditions obtaining in the glass a little more favourable than is practicable in glasses of standard design, of like magnifying power, and provided with objectives of similar size. The prisms are, however, much more difficult to produce, which is responsible for the somewhat higher price Page **13**

2. UNIVERSAL GLASSES

for Travel, Sport, and Hunting. This group comprises all those glasses which are particularly popular by reason of their wide ranges of usefulness and their moderate price. The **WIDE-ANGLE FIELD GLASSES** included in this group are becoming increasingly popular thanks to the fact that a high magnifying power (8-fold) is coupled with an exceptionally large field of view, and it is, therefore, notably in sporting circles that these glasses are meeting with the appreciation to which they are entitled. . . page **19**

3. FIELD GLASSES FOR SPECIAL PURPOSES,

being exceptionally highly magnifying instruments for hunting, for use at sea, for aviation, etc. This group likewise includes a wide-angle field glass, the **DELACTIS** model, which magnifies 8 times and has a great light-transmitting capacity. . . page **33**

4. MONOCULAR FIELD GLASSES

for use with one eye. These are the component bodies of the binocular glasses. Naturally, these do not show objects in relief. They are provided to meet those cases where the loss of one eye precludes the enjoyment of binocular vision or where the smaller weight or the lower price is a determining factor page **40**

5. THEATRE GLASSES

For use in theatres it is generally sufficient to use a magnification of $2\frac{1}{2}$ to 3 times, though in very large theatres and where the distance from the stage is very great higher magnifications are occasionally deemed preferable. Particular value attaches in these glasses to a field of view which includes a large portion of the stage, so that one may be able to watch all the characters engaged in a scene page **43**





JOINT FOCUSING AND SEPARATE FOCUSING TO THE EYEPIECES

Many models are made with separately focusing eyepieces and, in the alternative, with a joint focusing wheel at the middle between the two bodies. The optical equipment is in both cases the same.

SEPARATE FOCUSING

has the advantage that it provides better conditions for enclosing the optical combination in a perfectly dustproof and watertight casing. With this arrangement the binoculars are, therefore, adapted for use under every climatic condition.

Either eyepiece is focused independently by turning the eyecup to the right or left, and when a perfect adjustment results the position as shown by the index and scale and the eyepiece may be noted. This is a particularly desirable arrangement where the sight differs in the two eyes, as it very frequently does. Where the binocular is intended for personal use only it may be permanently left in its adjustment to the owner's eyes and so accommodated in its case. It will then be at all times ready for use.

THE JOINT FOCUSING ARRANGEMENT

has the advantage that the two eyepieces may be momentarily refocused whilst viewing objects which are rapidly moving at no very great but ever changing distances. Glasses with jointly focusing eyepieces are accordingly greatly in favour with frequenters of race courses, for watching boat races, football matches, flying demonstrations, and sporting events.

The theatre glasses are all fitted with this arrangement.

The right eyepiece may be focused independently of the joint focusing movement. It has a scale and index, while the left eyepiece has an immovable eyecup. This arrangement provides a means of allowing for differences in the sight of the two eyes. The binocular should be focused with the left eye and left eyepiece only, while the right eyepiece should be set with its index to 0. If necessary, the right eyepiece should then be adjusted separately without disturbing the twin focusing wheel until both eyes see with equal distinctness. The final adjustment of the right eyepiece should then be noted for future use. Before replacing the binocular in its case the twin focusing wheel should always be screwed back.

FOCUSING FOR NEAR

In the main the binocular, being essentially a telescope, is intended for viewing distant objects. From the preceding observations, however, it will have been gathered that it may be focused for comparatively near objects. Indeed, glasses of small magnifying power may be focused upon objects at a distance of only a few yards, by turning the twin focusing wheel in the positive (+) direction, so as to view them in a magnified state. To view still nearer objects the prism binoculars may be furnished with supplementary front lenses, whereby the prism glass becomes converted into a telescopic magnifier. Respecting this mode of using your field glass see under the heading "The Field Glass as a Magnifier" on page 32.

DISTANCE BETWEEN THE EYES

To enable any person to obtain the full benefit of which the binocular is capable it may not only be focused with due regard to possible differences in the sights of the two eyes but it may likewise be accurately set to the interpupillary distance between the user's eyes. This is an important point since the distance between the pupils of the eyes ranges from $2\frac{1}{16}$ to $2\frac{3}{4}$ inches. This adjustment is effected by bending the two bodies about their hinges at the middle. The fact that the glasses do not conform to the distance between the eyes shows itself by the two circular boundaries of the fields failing to freely fuse into one. The glass is furnished with a scale whereby the proper position may be noted and instantly restored.

ZEISS FIELD GLASSES

ARE TO BE OBTAINED FROM ALL REPUTED OPTICAL BUSINESS HOUSES AT THE MAKERS' PUBLISHED LIST PRICES.

Where there is no local establishment selling our glasses we shall be pleased to direct you to the nearest source.

For the purpose of identifying the required glass, when ordering, it is best to make use of the codeword appended to each model in the catalogue, such as SILVAMAR, DELTRENTIS, etc. These names will be found engraved upon the respective glasses. The price includes a stiff leather case, brown or black, as well as a shoulder strap to the case and another to the glass itself. If preferred, pocket cases of soft leather may be furnished. Your preference may be more expressly indicated in your order by appending to the codeword in question (say SILVAMAR) the syllable "DU" when the black case is wanted (thus SilvamardU) or the syllable "WE" when the soft case is preferred (thus SilvamardWE).

At moderate additional charges the glasses or their cases may be furnished with a compass, a rainguard, a yellow sun glass, sight correcting lenses, stands, etc. Respecting these see the Appendix in which the "Accessories" are specified (page 48).



CARL ZEISS
JENA



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ZEISS
MINIATURE
FIELD GLASSES

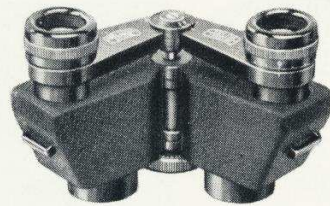


MINIATURE
FIELD GLASS
TELITA

Magnifying 6 times

A Flat Model Joint Focusing Glass
par excellence for Travel and Sport

Illustrations $\frac{1}{3}$ act. size



Bent for use



Extended

Outside dimensions,
when extended, about
 $1 \times 2\frac{1}{2} \times 4\frac{1}{4}$ inches

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OPTICAL PARTICULARS AND WEIGHTS

Model	Magnification	Effective Diameter of Objective		Diameter of Exit Pupil mm.	Light transmitting power	Field in angular measure	of View linear at a distance of 1000 yds. yds.	Weight of		
		mm.	in.					Field Glass oz.	Hard leather Case oz.	Soft leather Pouch oz.
TELITA.....	6x	18	0.71	3	9	8.3 ⁰	145	10	3 ¹ / ₄	2 ³ / ₈

MINIATURE FIELD GLASS TELITA



Magnifying 6 times

A FLAT MODEL JOINT FOCUSING GLASS FOR TRAVEL AND SPORT



THE TELITA is a very small and light glass, which, in consequence of its flat and compact form may always be carried with the utmost convenience, be it in a man's coat or waistcoat pocket or in a lady's handbag, when it is preferred to dispense with the leather sling case. Even when accommodated in the heavier case it is no more troublesome than a small film camera. Magnifying 6 times, and by reason of its excellent light-transmitting properties and the convenient arrangement of its twin focusing device to the two eyepieces, the TELITA glass is in the true sense of the word a universal field glass for travel and sport. Though dainty in its form and finish, the glass lacks none of the substantial qualities of the Zeiss standard. The hinge joint, in particular, is of a kind which will stand a considerable amount of hard wear.

TELITA with Appurtenances, viz:

- Brown** solid leather sling case and shoulder strap to the glass
- Soft** pouch of brown suede leather and shoulder strap to the glass.....

Codeword	Price
TELITA	£ 12.15.0
TELITAWE ...	£ 12.15.0

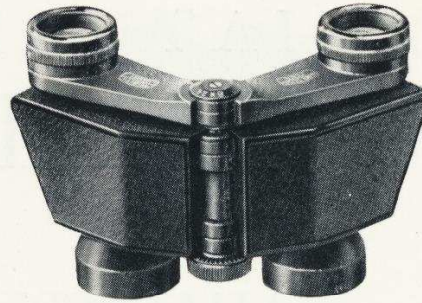


FLAT MODEL
FIELD GLASS
TURITA

Magnifying 8 times

Highly Magnifying Twin Focusing
Models

Illustrations $\frac{1}{3}$ act. size



Bent for use



Extended flat for carrying



Outside dimensions, when extended,
about $1\frac{3}{16} \times 3\frac{1}{4} \times 5\frac{5}{16}$ inches

OPTICAL PARTICULARS AND WEIGHTS

Model	Magnification	Effective Diameter of Objective		Dia- meter of Exit Pupil mm.	Light trans- mit- ting power	Field in angular mea- sure	of View linear at a distance of 1000 yds. yds.	Weight of		
		mm.	in.					Field Glass oz.	Hard leather Case oz.	Soft leather Pouch oz.
TURITA.....	8x	24	0.94	3	9	6.3°	110	15	4 $\frac{5}{8}$	3 $\frac{1}{2}$

FLAT MODEL FIELD GLASS TURITA



Magnifying 8 times

HIGHLY MAGNIFYING TWIN FOCUSING MODELS

SINCE the introduction of our wide-angle field glasses, as described in a later portion of this catalogue, the demand for high-power field glasses has continually grown. Glasses magnifying 8 times are now much more popular than was formerly the case. We have accordingly placed at the side of the TELITA Glass just described another glass of like type but magnifying 8 times, *viz* the TURITA Field Glass shown in the opposite illustrations. In the matter of dimensions and weight this glass still scores over optically corresponding Porro joint-focusing glasses. Also, in consequence of its flatter form it may be conveniently carried in the pocket. It is, therefore, much to be recommended for the use of tourists and, owing to the presence of the joint-focusing device, also for watching sports. The light-transmitting capacity is the same as that of the TELITA glass, while the field of view, owing to the higher magnification, is naturally a little smaller.

TURITA with Appurtenances, *viz*:

Brown solid leather sling case and shoulder strap to the glass

Soft brown suede leather pouch and shoulder strap to the glass

Codeword	Price
TURITA.....	£ 15.0.0
TURITAWE	£ 15.0.0



MINIATURE FIELD GLASS TURMON MONOCULAR

Magnifying 8 times

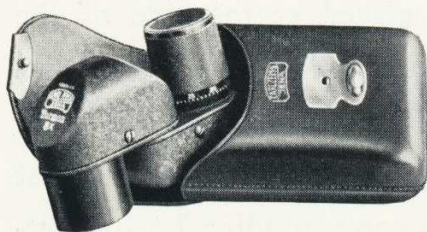
THE PRISM FIELD GLASS FOR
THE WAISTCOAT POCKET



Flexed for use



Extended flat for the waistcoat pocket



Outside dimensions, when extended,
 $1 \times 1\frac{9}{16} \times 2\frac{1}{2}$ inches

Illustrations $\frac{1}{3}$ actual size

IN this small model we have revived the use of the old hand telescopes for use with one eye which were in vogue in the last century. When fully extended, the TURMON is little larger than a matchbox and hence may be conveniently accommodated in the waistcoat pocket together with its leather case. When flexed about its hinge for use it can be actually concealed in the hand. It is greatly valued by all those who insist on dispensing with any but the absolutely needful encumbrance while touring in high mountain regions or when skiing or flying. At the same time, it furnishes a magnification which is twice as high as that of any of the former small pocket telescopes and a field of view as large as that of a prism field glass. It is fitted with a rotating eyepiece and diopetre scale; so that it may be adapted to any degree of near and long sight. Besides being available for use as a telescope it can be used as a telescopic magnifier for viewing objects at short distances, since the rotating eyepiece affords an extraordinary range of focal adjustment in the "plus" direction. See also "The field glass as a Magnifier" on page 32.

TURMON with Appurtenances, viz:

- Brown solid leather case
- Black solid leather case

Codeword	Price
TURMON	£ 4.13.0
TURMONDU ..	£ 4.13.0

OPTICAL PARTICULARS AND WEIGHTS

Model	Magnification	Effective Diameter of Objective		Diameter of Exit Pupil mm.	Light transmitting power	Field of View		Weight of	
		mm.	in.			in angular measure	linear at a distance of 1000 yds. yds.	Field Glass oz.	Hard leather Case oz.
TURMON	8x	21	0.83	2.6	6.76	6.3°	110	3½	7/8



ZEISS **MB**
UNIVERSAL FIELD GLASSES



U N I V E R S A L
F I E L D G L A S S
T U R O L E M

Fitted *with central* twin focusing device
M a g n i f y i n g 4 t i m e s
For Travel, Sports, and Theatre



MB



Illustrations $\frac{1}{3}$ actual size

OPTICAL
PARTICULARS AND
WEIGHTS

Model	Magnification	Effective Diameter of Objective		Diameter of Exit Pupil mm.	Light transmitting power	Field of View		Weight of		
		mm.	in.			in angular measure	in terms of yds. at a distance of 1000 yds.	Field Glass oz.	Hard leather Case oz.	Soft leather Pouch oz.
TUROLEM...	4×	20	0.79	5	25	10.3°	182	10½	8⅔	2½

UNIVERSAL FIELD GLASS

TUROLEM



Fitted *with central* twin focusing device
Magnifying **4** times

FOR TRAVEL, SPORTS, AND THEATRE

THE TUROLEM is a very light and small and incidentally also moderately priced Porro prism glass. It is fitted with a central twin focusing device and is well adapted for all who wish to be able to use the glass outdoors while travelling and for watching sporting events as well as indoors in the theatre. Its magnification of 4 diameters satisfies these requirements. Its exceptionally large field of view is a matter of special value in the theatre and when watching sports, for the glass embraces a scene 182 yards wide at a distance of 1000 yards, which, applied to the theatre, means that it takes in a scene 5½ yards wide at a distance of 30 yards. Its great light-transmitting capacity renders it available outdoors even in failing light.

TUROLEM with Appurtenances, viz:

- Brown** solid leather sling case and shoulder strap to the glass
- Black** solid leather sling case and shoulder strap to the glass
- Soft** brown suede leather pouch and shoulder strap to the glass

Codeword	Price
TUROLEM	£ 9.13.0
TUROLEMDU .	£ 9.13.0
TUROLEMWE .	£ 9.10.0

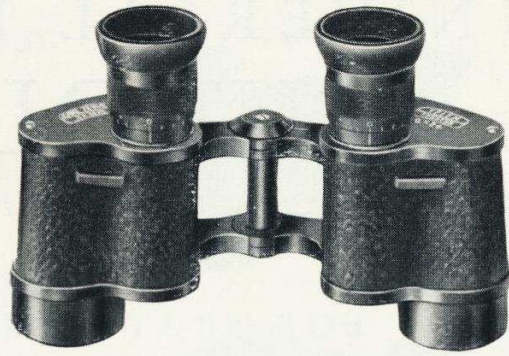


UNIVERSAL
FIELD GLASSES
TELEX

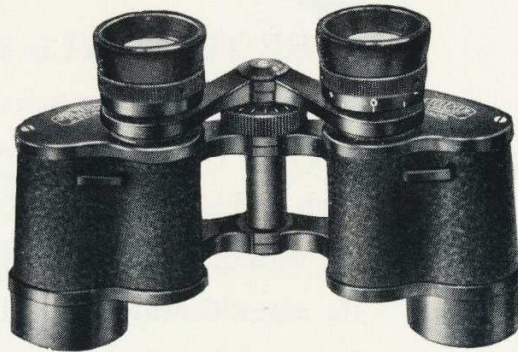
AND TELEXEM

Magnifying 6 times
For Travel, Sport, Rambles, and
Touring

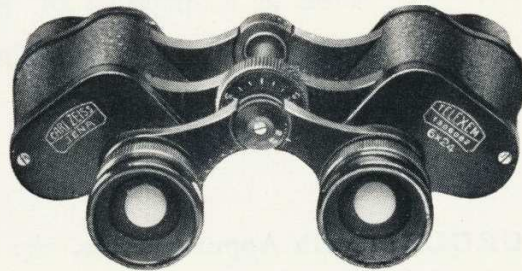
Illustrations $\frac{1}{3}$ actual size



TELEX
with separately focusing eyepieces



TELEXEM
with central twin focusing device



OPTICAL
PARTICULARS AND
WEIGHTS

Model	Magnification	Diameter of the Objective		Diameter of the Exit Pupil	Light transmitting power	Field of View		Weight of		
		mm.	in.			mm.	in angular measure	linear at a distance of 1000 yds.	Field Glass	Leather Case
								oz.	oz.	oz.
TELEX.....	6×	24	0.94	4	16	8.5°	150	16 $\frac{3}{4}$	10 $\frac{1}{2}$	4
TELEXEM .	6×	24	0.94	4	16	8.5°	150	19 $\frac{1}{2}$	10 $\frac{1}{2}$	4

UNIVERSAL FIELD GLASSES TELEX AND TELEXEM



Magnifying **6** times

FOR TRAVEL, SPORT, RAMBLES, AND TOURING

THE TELEX and its counterpart with twin focusing device, the TELEXEM, are both relatively light and moderately priced field glasses of the standard type with Porro prisms. They are particularly to be recommended for travels, sports, rambles, touring in the mountains, etc. Their optical capacity will not fail in all these circumstances to satisfy every requirement, especially in the matter of light-transmitting capacity and the size of the field of view. They are accordingly everywhere greatly in favour as allround glasses. The model with central twin focusing device is particularly well adapted for watching rapidly changing sporting events.

TELEX with Appurtenances, viz:

- Brown** solid leather sling case and shoulder strap to the glass
- Black** solid leather sling case and shoulder strap to the glass
- Soft brown suede** leather pouch and shoulder strap to the glass

Codeword	Price
TELEX	£ 9.7.0
TELEXDU	£ 9.7.0
TELEXWE	£ 9.4.0

TELEXEM with Appurtenances, viz:

- Brown** solid leather sling case and shoulder strap to the glass
- Black** solid leather sling case and shoulder strap to the glass
- Soft brown suede** leather pouch and shoulder strap to the glass

Codeword	Price
TELEXEM	£ 10.9.0
TELEXEMDU .	£ 10.9.0
TELEXEMWE..	£ 10.6.0

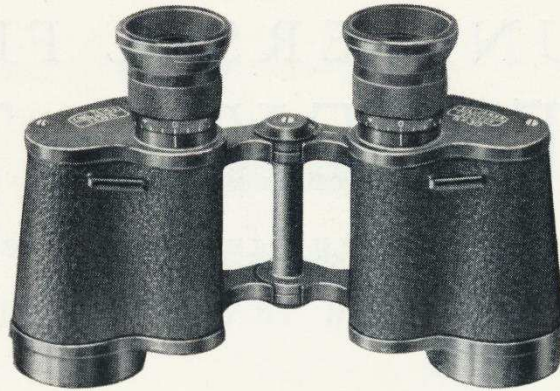


UNIVERSAL
FIELD GLASSES
SILVAMAR

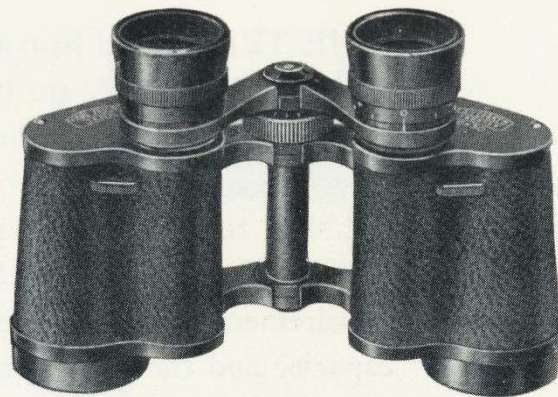
AND SILVAREM

Magnifying 6 times
For Hunting, Navigation, Sport

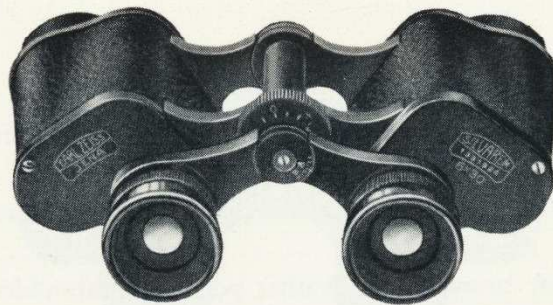
Illustrations $\frac{1}{3}$ actual size



SILVAMAR
with separately focusing eyepieces



SILVAREM
with central twin focusing device



OPTICAL
PARTICULARS AND
WEIGHTS

Model	Magnification	Diameter of the objective		Diameter of the Exit Pupil	Light transmitting power	Field of view		Field Glass	Weight of	
		mm.	in.			mm.	mm.		linear at a distance of 1000 yds.	oz.
SILVAMAR .	6x	30	1.18	5	25	8 5 ⁰	150	19	11 ³ / ₄	4
SILVAREM .	6x	30	1.18	5	25	8.5 ⁰	150	21 ³ / ₄	11 ³ / ₄	4

UNIVERSAL FIELD GLASSES SILVAMAR AND SILVAREM

MB

Magnifying 6 times

FOR HUNTING, NAVIGATION, SPORT

AS the names suggest, which are made up of the words *silva* (the forest) and *mare* (the sea), these two models are primarily intended for use in forests and at sea. The SILVAMAR model is also in great demand for the use of officers in the army of many countries, and as such has met with extraordinary appreciation. Prominent among its optical qualities are the large field of view, which is sharply defined up to the edge, and its remarkable light-transmitting capacity. These glasses can, therefore, be used with success in advanced dusk, which is a matter of the utmost importance to huntsmen and professional users at sea and elsewhere. On the turf the SILVAREM is preferred owing to its central twin focusing device.

SILVAMAR with Appurtenances, viz:

- Brown** solid leather sling case and shoulder strap to the glass
- Black** solid leather sling case and shoulder strap to the glass
- Soft brown** suede leather pouch and shoulder strap to the glass

Codeword	Price
SILVAMAR....	£ 11 . 11 . 0
SILVAMARDU	£ 11 . 11 . 0
SILVAMARWE	£ 11 . 6 . 6

SILVAREM with Appurtenances, viz:

- Brown** solid leather sling case and shoulder strap to the glass
- Black** solid leather sling case and shoulder strap to the glass
- Soft brown** suede leather pouch and shoulder strap to the glass

Codeword	Price
SILVAREM ...	£ 12 . 13 . 0
SILVAREMDU.	£ 12 . 13 . 0
SILVAREMWE	£ 12 . 8 . 6

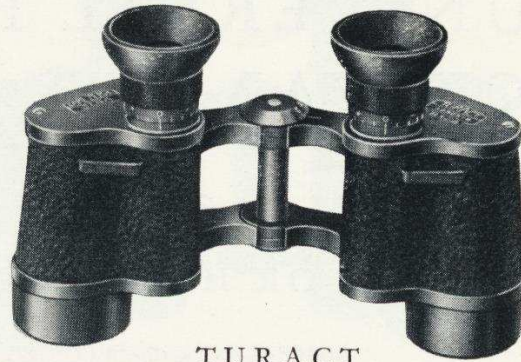
Rainguard, graticule, compass, etc., see "Accessories" at the end of the catalogue.



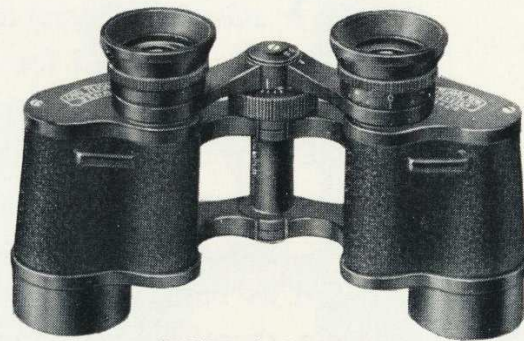
U N I V E R S A L
F I E L D G L A S S E S
T U R A C T

AND T U R A C T E M
M a g n i f y i n g 8 t i m e s
F o r T r a v e l , R a m b l e s , T o u r i n g

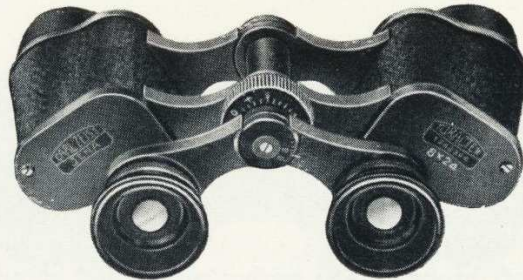
I l l u s t r a t i o n s $\frac{1}{3}$ a c t u a l s i z e



T U R A C T
w i t h s e p a r a t e l y f o c u s i n g e y e p i e c e s



T U R A C T E M
w i t h c e n t r a l t w i n f o c u s i n g d e v i c e



O P T I C A L
P A R T I C U L A R S A N D
W E I G H T S

Model	Magnification	Effective Diameter of Objective		Diameter of Exit Pupil mm.	Light transmitting power	Field of View		Weight of		
		mm.	in.			in angular measure	linear at a distance of 1000 yds.	Field Glass oz.	Hard leather Case oz.	Soft leather Pouch oz.
TURACT	8×	24	0.94	3	9	6.3°	110	13 ³ / ₄	11 ¹ / ₈	3 ¹ / ₂
TURACTEM . .	8×	24	0.94	3	9	6.3°	110	15 ⁷ / ₈	11 ¹ / ₈	3 ¹ / ₂

UNIVERSAL FIELD GLASSES TURACT AND TURACTEM



Magnifying 8 times

FOR TRAVEL, RAMBLES, TOURING

THESE two models satisfy a demand for a somewhat higher magnification than that formerly considered adequate for general purposes. The TURACT and its twin brother the TURACTEM, are moderately priced Porro prism glasses with a magnification 8 times. They are neither larger nor heavier than the already described universal glasses Telex and Telexem. In view of their higher magnifying power the field of view and the light-transmitting capacity are naturally a little lower, but they are ample, especially for use in the daytime, for which these glasses are primarily intended.

TURACT with Appurtenances, viz:

- Brown** solid leather sling case and shoulder strap to the glass
- Black** solid leather sling case and shoulder strap to the glass
- Soft brown suede** leather pouch and shoulder strap to the glass

Codeword	Price
TURACT	£ 10.4.0
TURACTDU ...	£ 10.4.0
TURACTWE ...	£ 10.1.0

TURACTEM with Appurtenances, viz:

- Brown** solid leather sling case and shoulder strap to the glass
- Black** solid leather sling case and shoulder strap to the glass
- Soft brown suede** leather pouch and shoulder strap to the glass.....

Codeword	Price
TURACTEM ...	£ 11.6.0
TURACTEMDU.	£ 11.6.0
TURACTEMWE	£ 11.3.0



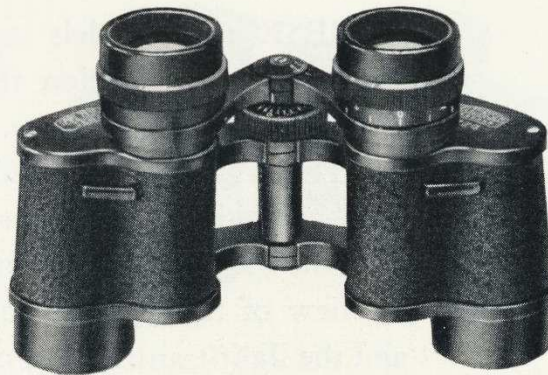
UNIVERSAL
FIELD GLASSES
DELTURIS
AND DELTURISEM

Magnifying 8 times
Wide-angle Field Glasses for
Travel, Sport, Touring

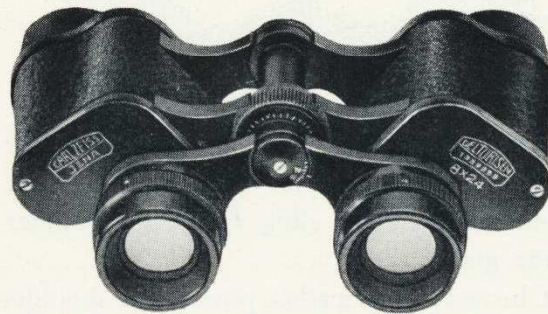
Illustrations $\frac{1}{3}$ actual size



DELTURIS
with separately focusing eyepieces



DELTURISEM
with central twin focusing device



OPTICAL
PARTICULARS AND
WEIGHTS

Model	Magnification	Effective Diameter of Objective		Diameter of Exit Pupil mm.	Light transmitting power	Field of View in angular measure linear at a distance of 100 yds.		Weight of		
		mm.	in.			Field Glass oz.	Hard leather Case oz.	Soft leather Pouch oz.		
DELTURIS ...	8x	24	0.94	3	9	8.75°	154	19 ³ / ₄	10 ¹ / ₂	4
DELTURISEM	8x	24	0.94	3	9	8.75°	154	20 ¹ / ₈	10 ¹ / ₂	4

UNIVERSAL FIELD GLASSES DELTURIS AND DELTURISEM



Magnifying 8 times

WIDE-ANGLE FIELD GLASSES FOR TRAVEL, SPORT,
TOURING

THOSE who attach value to the higher magnifying power of 8 diameters but do not wish to forego the large field of view of the glass having a magnifying power of 6 diameters cannot do better than select one of the *Zeiss Wide Angle* Field Glasses described on this and the succeeding pages. The DELTURIS and DELTURISEM glasses are as small and compact in their design as the TELEX and TURACT travelling glasses, but they combine with the high magnification of the latter the large field of view of the former. The large field of view not only adds to the pleasure enjoyed when viewing a landscape or a mountain range, but also renders it much easier to pick out certain points in the view and to follow objects in motion. This is found to be a special advantage to watchers of sporting events.

DELTURIS with Appurtenances, viz:

- Brown** solid leather sling case and shoulder strap to the glass
- Black** solid leather sling case and shoulder strap to the glass
- Soft brown suede** leather pouch and shoulder strap to the glass

Codeword	Price
DELTURIS	£ 11 . 6 . 0
DELTURISDU ..	£ 11 . 6 . 0
DELTURISWE .	£ 11 . 3 . 0

DELTURISEM with Appurtenances, viz:

- Brown** solid leather sling case and shoulder strap to the glass
- Black** solid leather sling case and shoulder strap to the glass
- Soft brown suede** leather pouch and shoulder strap to the glass

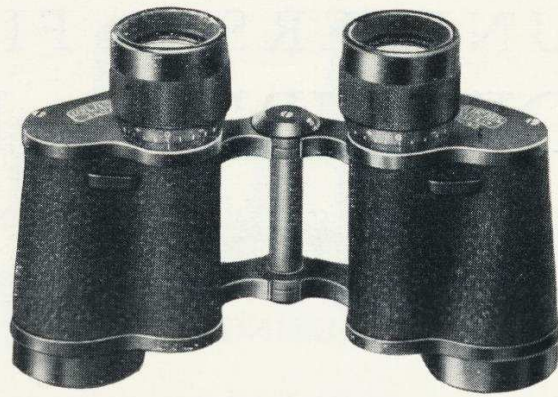
Codeword	Price
DELTURISEM ..	£ 12 . 8 . 0
DELTURISEMDU	£ 12 . 8 . 0
DELTURISEMWE	£ 12 . 5 . 0



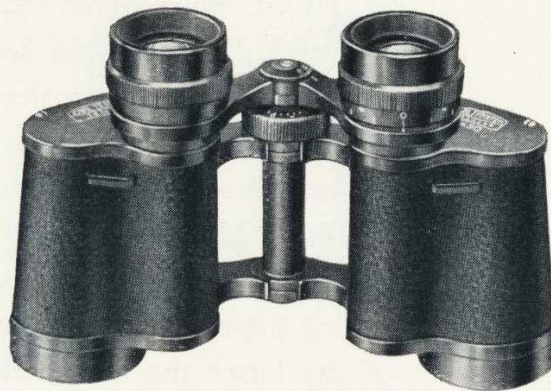
UNIVERSAL
FIELD GLASSES
DELTRENTIS
AND DELTRINTEM

Magnifying 8 times
Wide-angle Field Glasses of Great
Light-transmitting Capacity for
Travel, Sport, Hunting

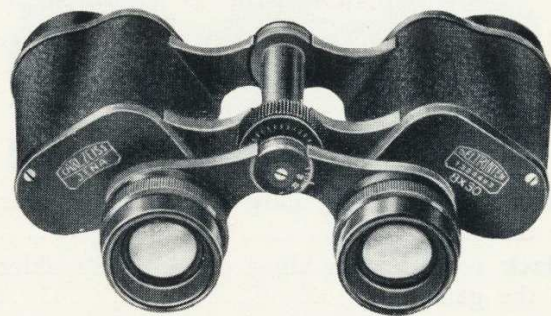
Illustrations $\frac{1}{3}$ actual size



DELTRENTIS
with separately focusing eyepieces



DELTRINTEM
with central twin focusing device



OPTICAL
PARTICULARS AND
WEIGHTS

Model	Magnification	Effective Diameter of Objective		Diameter of Exit Pupil mm.	Light transmitting power	Field in angular measure	of View linear at a distance of 1000 yds. yds.	Weight of		
		mm.	in.					Field Glass oz.	Hard leather Case oz.	Soft leather Pouch oz.
DELTRENTIS	8x	30	1.18	3.75	14.06	8.5°	150	21 $\frac{1}{4}$	11 $\frac{7}{8}$	4
DELTRINTEM	8x	30	1.18	3.75	14.06	8.5°	150	23 $\frac{7}{8}$	11 $\frac{7}{8}$	4

UNIVERSAL FIELD GLASSES DELTRENTIS AND DELTRINTEM

Magnifying 8 times

WIDE-ANGLE FIELD GLASSES OF GREAT LIGHT-TRANSMITTING CAPACITY FOR TRAVEL, SPORT, HUNTING



THANKS to their exceptionally fine optical qualities, these two *wide-angle* field glasses, the DELTRENTIS and the DELTRINTEM, have ever since their introduction a few years ago secured an extraordinary and ever growing popularity, and this applies to a wide range of uses. The instrument is accordingly a great favourite on the turf, at sea, in the hands of motor tourists, as a hunting glass, and as a travelling glass in general.

Though it magnifies 8 times, it furnishes a field of view equal to that of the SILVAMAR hunting and marine glass, which the DELTRENTIS resembles in size and weight. With one of these wide-angle glasses one is enabled to survey a field which is about twice the size as compared with that seen through the older prism glass magnifying 8 times, such as the TURACT. Moreover, the light-transmitting power is remarkably good for a glass magnifying 8 times.

DELTRENTIS with Appurtenances, viz:

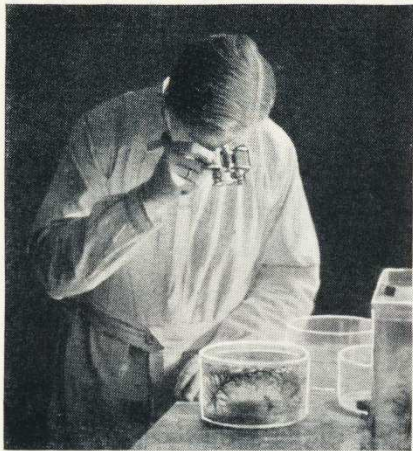
- Brown** solid leather sling case and shoulder strap to the glass
- Black** solid leather sling case and shoulder strap to the glass
- Soft brown** suede leather pouch and shoulder strap to the glass

Codeword	Price
DELTRENTIS ...	£13. 4.0
DELTRENTISDU.	£13. 4.0
DELTRENTISWE	£12.19.6

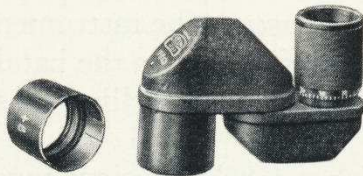
DELTRINTEM with Appurtenances, viz:

- Brown** solid leather sling case and shoulder strap to the glass
- Black** solid leather sling case and shoulder strap to the glass
- Soft brown** suede leather pouch and shoulder strap to the glass

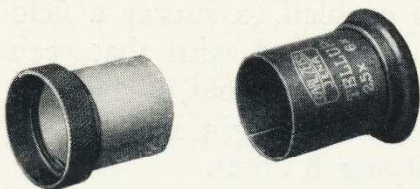
Codeword	Price
DELTRINTEM ...	£14. 6.0
DELTRINTEM DU	£14. 6.0
DELTRINTEMWE	£14. 1.6



The TELEATER Theatre Glass with front lens attachment, forming a binocular telescopic magnifier



The TURMON 8× with front lens attachment 2×, forming a telescopic magnifier 16×



The TELLUP 2×, a pocket telescope, available also for use as a telescopic magnifier. The objective by itself may be used as a magnifier 6×



The TELEX 6× with front lens attachment (1.25×), forming a telescopic magnifier 7½×

THE FIELD GLASS USED AS A MAGNIFIER

IT is more readily practicable than is generally supposed to employ the field glass, or to arrange it, for viewing near objects. The models of small and moderate magnifying power may be focused with the aid of the eyepiece or central motion in the "plus" (+) direction within a few yards from an object. Still nearer objects may be viewed by attaching to the field glass a supplementary lens, whereby the instrument is converted into a

TELESCOPIC MAGNIFIER.

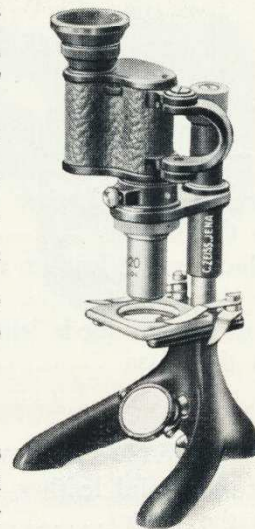
With the aid of interchangeable supplementary lenses high magnifications (up to 30×) may be attained with the notable advantage over the ordinary simple magnifiers of like magnifying power that the objects may be viewed at a vastly greater distance.

Instead of the supplementary magnifier lens a microscope objective may be attached to the monocular prism telescope magnifying 3× and also to the theatre glass. This combination in conjunction with a small stand with slow motion and illuminating mirror furnishes a

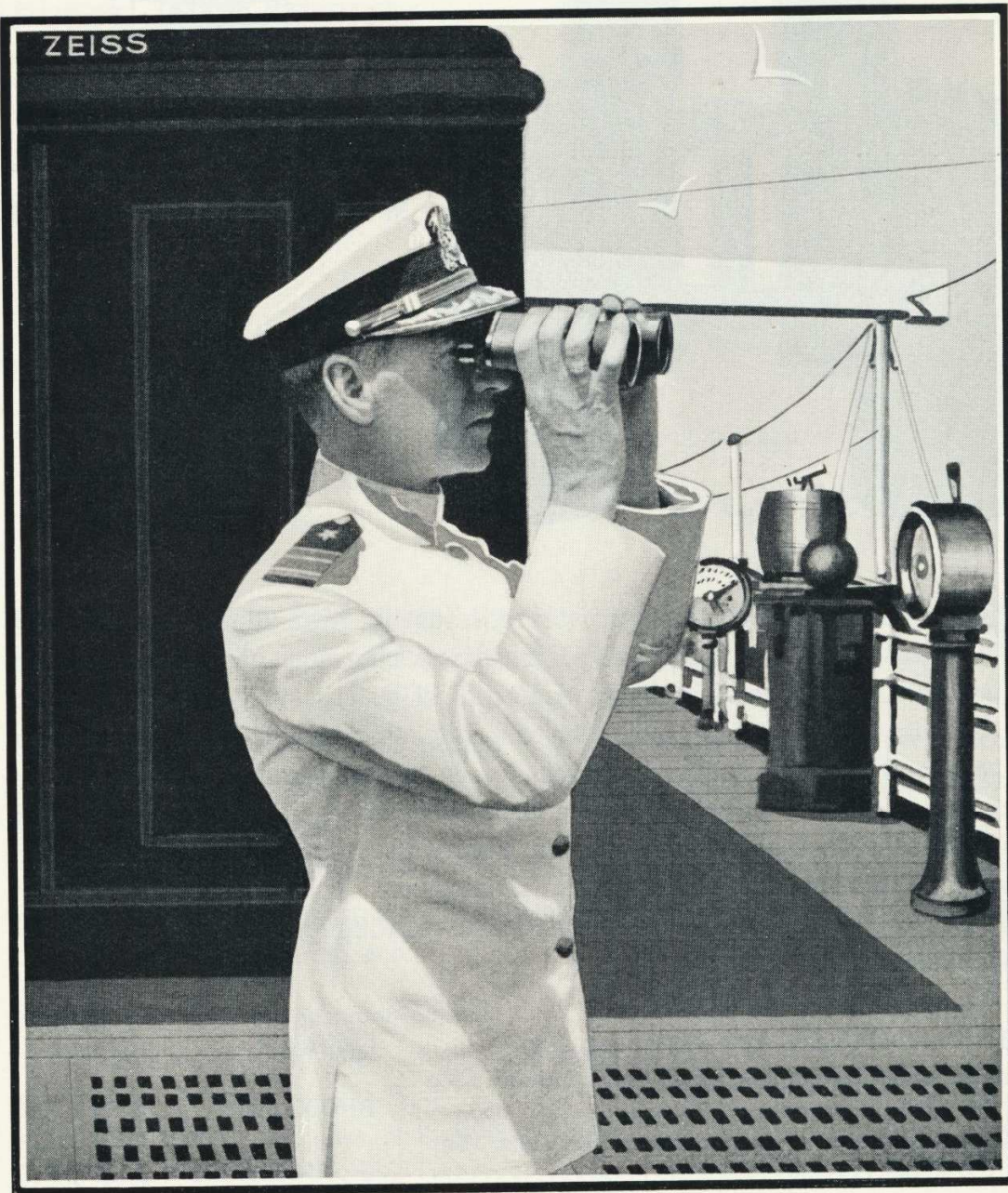
TELESCOPIC MICROSCOPE,

as will be seen from the annexed illustration. These combinations, according to the microscope objective used, furnish magnifications up to 40 diameters.

Respecting Telescopic Magnifiers and Telescopic Microscopes and their Accessories for a great variety of uses separate publications may be obtained on application.



Telescopic Microscope



ZEISS FIELD GLASSES
FOR SPECIAL PURPOSES



UNIVERSAL FIELD GLASSES DELTRENTIS AND DELTRINTEM



Magnifying 8 times

WIDE-ANGLE FIELD GLASSES OF GREAT LIGHT-TRANSMITTING CAPACITY FOR TRAVEL, SPORT, HUNTING

THANKS to their exceptionally fine optical qualities, these two *wide-angle* field glasses, the DELTRENTIS and the DELTRINTEM, have ever since their introduction a few years ago secured an extraordinary and ever growing popularity, and this applies to a wide range of uses. The instrument is accordingly a great favourite on the turf, at sea, in the hands of motor tourists, as a hunting glass, and as a travelling glass in general.

Though it magnifies 8 times, it furnishes a field of view equal to that of the SILVAMAR hunting and marine glass, which the DELTRENTIS resembles in size and weight. With one of these wide-angle glasses one is enabled to survey a field which is about twice the size as compared with that seen through the older prism glass magnifying 8 times, such as the TURACT. Moreover, the light-transmitting power is remarkably good for a glass magnifying 8 times.

DELTRENTIS with Appurtenances, viz:

- Brown** solid leather sling case and shoulder strap to the glass
- Black** solid leather sling case and shoulder strap to the glass
- Soft brown suede** leather pouch and shoulder strap to the glass

Codeword	Price
DELTRENTIS ...	£ 13 . 4 . 0
DELTRENTISDU.	£ 13 . 4 . 0
DELTRENTISWE	£ 12 . 19 . 6

DELTRINTEM with Appurtenances, viz:

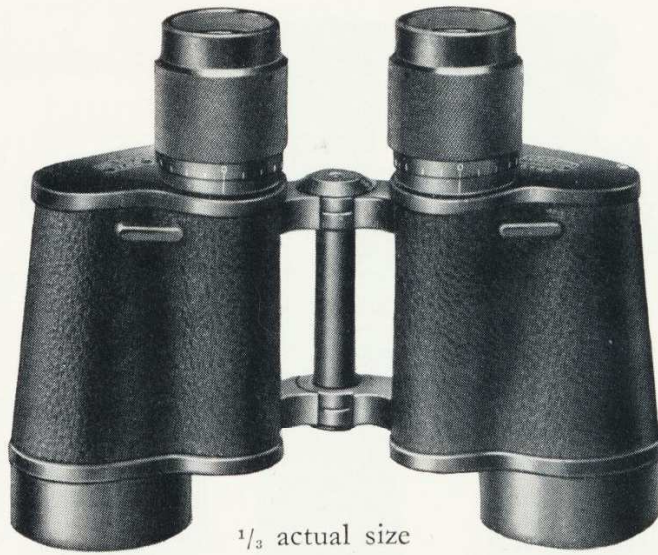
- Brown** solid leather sling case and shoulder strap to the glass
- Black** solid leather sling case and shoulder strap to the glass
- Soft brown suede** leather pouch and shoulder strap to the glass

Codeword	Price
DELTRINTEM ...	£ 14 . 6 . 0
DELTRINTEM DU	£ 14 . 6 . 0
DELTRINTEM WE	£ 14 . 1 . 6



DELECTIS

Magnifying 8 times



1/3 actual size

WIDE ANGLE FIELD
GLASS OF GREAT LIGHT
TRANSMITTING CAPA-
CITY FOR SPORT, HUNT-
ING, USE AT SEA



OF the *wide-angle* field glasses the DELECTIS is the one having the greatest light-transmitting capacity. The latter is equal to that of the SILVAMAR with a magnifying power of 6 times, while its field of view embraces 154 yards at a distance of 1000 yards and thus exceeds the covering power of the SILVAMAR, while yet endowed with a magnifying power of 8 times.

These extraordinary resources of the DELECTIS render it best adapted for general sporting purposes, for hunting, motor touring, expeditions, for marine observations, etc.

DELECTIS with Appurtenances, viz:

Brown solid leather sling case and shoulder strap to the glass

Black solid leather sling case and shoulder strap to the glass

Codeword	Price
DELECTIS ...	£ 16 . 10 . 0
DELECTISDU.	£ 16 . 10 . 0

For Compass, Rainguard, Graticule, etc. see "Accessories" at the end of the Catalogue

OPTICAL PARTICULARS AND WEIGHTS

Model	Magnification	Effective Diameter of Objective		Dia- meter of Exit Pupil mm.	Light transmitting power	Field of View linear at a distance of 1000 yds.		Weight of Field Glass Hard leather Case	
		mm.	in.			in angular measure	yds.	oz.	oz.
DELECTIS... .	8x	40	1.57	5	25	8.75°	154	36 ³ / ₄	20



DEKAR

Magnifying 10 times



1/3 actual size

FIELD GLASS OF GREAT LIGHT-TRANSMITTING CAPACITY FOR SEA AND AIR NAVIGATION

IN the DEKAR Glass the magnifying power has been carried as high as 10 times. Nevertheless, the glass has the same light-transmitting capacity as the hunting and marine glasses, the SILVAMAR and DELACTIS, so that its use is attended with considerable success even in pronounced dusk and in dull weather. The DEKAR is mainly adapted for use at sea and on aircraft.

DEKAR with Appurtenances, viz:

Brown solid leather sling case with shoulder strap to the glass

Black solid leather sling case with shoulder strap to the glass

Accessories:

Stand with case

Stockhead for ditto

Codeword Price

DEKAR £ 24 . 4 . 0

DEKARDU ... £ 24 . 4 . 0

DEKARSTA .. £ 2 . 4 . 0

DEKARAUF .. £ 1 . 19 . 0

For other accessories see end of this Catalogue.

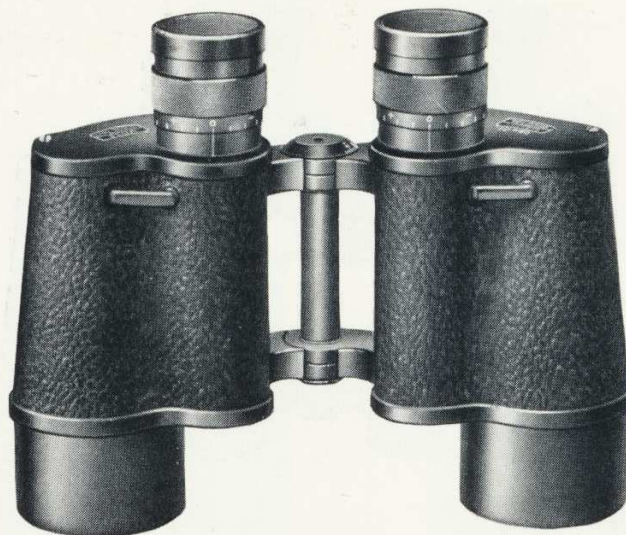
OPTICAL PARTICULARS AND WEIGHTS

Model	Magnification	Effective Diameter of Objective		Diameter of Exit Pupil mm.	Light transmitting power	Field of View		Weight of	
		mm.	in.			in angular measure	linear at a distance of 1000 yds.	Field Glass oz.	Hard leather Case oz.
DEKAR	10×	50	1.97	5	25	5°	87	40 1/4	22 1/4



TELONAR

Magnifying 12 times



1/3 actual size



FIELD GLASS OF GREAT LIGHT-TRANSMITTING CAPACITY FOR GREAT DISTANCES

THOSE who have frequent occasion to make long distance observations and for this purpose require a higher than the customary magnification of 6 to 8 times may let their choice fall on the TELONAR glass and the two succeeding models.

The TELONAR, though magnifying 12 times, has a good light-transmitting capacity. Both qualities taken together furnish a resolving power whereby the field glass becomes available beyond daylight use, in fact, it may be used with advantage in pronounced dusk.

TELONAR with Appurtenances, viz:

Brown solid leather sling case and shoulder strap to the glass

Black solid leather sling case and shoulder strap to the glass

Accessories (see also end of catalogue):

Stand with case

Stockhead for ditto

Codeword	Price
TELONAR	£ 16 . 10 . 0
TELONARDU .	£ 16 . 10 . 0
TELONARSTA	£ 2 . 4 . 0
TELONARAUF	£ 1 . 19 . 0

OPTICAL PARTICULARS AND WEIGHTS

Model	Magnification	Effective Diameter of Objective		Diameter of Exit Pupil mm.	Light transmitting power	Field of View in angular measure	Field of View linear at a distance of 1000 yds. yds.	Weight of	
		mm.	in.					Field Glass oz.	Hard leather Case oz.
TELONAR ...	12x	40	1.57	3.3	10.9	4.2°	73	37	19



1/3 actual size

TELSEXOR

Magnifying 16 times

HIGH POWER FIELD GLASS FOR LONG DISTANCES AND REQUIRING A STEADY SUPPORT



THE TELSEXOR Glass is the most powerfully magnifying field glass of the standard type with Porro prisms made by us. Since its very high magnification could not fail to render prolonged observation impracticable owing to the tremor of the hands, we recommend the use of some suitable support to the arms or, where the observation is exceptionally prolonged, to employ a stand. The same would apply to other highly magnifying field glasses.

TELSEXOR with Appurtenances, viz:

Brown solid leather sling case and shoulder strap to the glass

Black solid leather sling case and shoulder strap to the glass

Accessories (see also end of catalogue):

Stand with canvas case

Stockhead for ditto

Codeword	Price
TELSEXOR	£ 16 . 10 . 0
TELSEXORDU.	£ 16 . 10 . 0
TELSEXORSTA	£ 2 . 4 . 0
TELSEXORAUFL	£ 1 . 19 . 0

OPTICAL PARTICULARS AND WEIGHTS

Model	Magnification	Effective Diameter of Objective		Diameter of Exit Pupil mm.	Light transmitting power	Field of View linear at a distance of 1000 yds.		Weight of Field Glass and Hard leather Case	
		mm.	in.			in angular measure	yds.	oz.	oz.
TELSEXOR ..	16 ×	40	1.57	2.5	6.25	3.16°	55	35	19



MB

DELFORT

Magnifying 18 times

HIGH POWER FIELD GLASS
AND VIEW TELESCOPE

THE DELFORT field glass resembles already in its form our binocular view telescopes. Its high magnification of 18 times suffices to impart to these glasses the character of view telescopes. On the other hand, their size and weight are still within such limits that the instrument may without discomfort be taken anywhere in its sling case and held in the hands for short observations. For prolonged viewing it will be necessary to support the arms or to use a stand.



$\frac{1}{3}$ actual size

DELFORT with Appurtenances, viz:

Brown solid leather sling case and shoulder strap to the glass

Black solid leather sling case and shoulder strap to the glass

Accessories (see also end of catalogue):

Stand with canvas case

Stockhead for the stand

Codeword	Price
DELFORT.....	£ 25 . 6 . 0
DELFORTDU .	£ 25 . 6 . 0
DELFORTSTA	£ 2 . 4 . 0
DELFORTAUF	£ 1 . 19 . 0

OPTICAL PARTICULARS AND WEIGHTS

Model	Magnification	Effective Diameter of Objective		Diameter of Exit Pupil mm.	Light transmitting power	Field of View linear at a distance of 1000 yds.		Weight of Field Glass Hard leather Case	
		mm.	in.			in angular measure	yds.	oz.	oz.
DELFORT....	18x	50	1.97	2.8	7.84	2,8°	49	38½	25½



MONOCULAR FIELD GLASSES

CORRESPONDING to the majority of Zeiss field glasses monocular models of like optical form are supplied for use with one eye. Naturally, these glasses do not furnish a view in relief. They meet existing requirements where either the loss of one eye precludes the possibility of seeing in relief or where special purposes render this superfluous. Moreover, the glasses may be acceptable to those to whom the smaller weight and the lower price are matters of primary consideration.



Illustrations $\frac{1}{3}$ actual size

For description of the special TURMON model see page 18

OPTICAL PARTICULARS AND WEIGHTS

Magnification	Effective Diameter of Objective		In stiff brown leather case with leather straps Codeword	In stiff black leather case with leather straps Codeword	Price £ s. d.	In soft leather pouch Codeword	Price £ s. d.	Light transmitting power	Field of View in terms of linear meas. at a dist. of 1000 yds.	Weight of		
	mm.	in.								Field Glass oz.	Hard leather case with straps oz.	Soft leather Pouch oz.
6 ×	24	0.94	Telexmo	Telexmodu	4. 8. 0	Telexmowe	4. 5. 0	16	150	7	6 $\frac{1}{4}$	2 $\frac{1}{2}$
6 ×	30	1.18	Simpsilv	Simpsilvdu	5. 10. 0	Simpsilvwe	5. 7. 0	25	150	9	8 $\frac{1}{8}$	2 $\frac{7}{8}$
7 ×	50	1.97	Binoctarmo	Binoctarmodu	8. 11. 0	—	—	50.4	128	17 $\frac{2}{3}$	10 $\frac{5}{8}$	—
8 ×	21	0.83	Turmon	Turmondu	4. 13. 0	—	—	6.76	110	3 $\frac{1}{2}$	7 $\frac{7}{8}$	—
8 ×	24	0.94	Simplact	Simplactdu	4. 14. 0	Simplactwe	4. 11. 0	9	110	6 $\frac{1}{4}$	6 $\frac{1}{4}$	2 $\frac{1}{2}$
8 ×	24	0.94	Delturmo	Delturmodu	5. 10. 0	Delturmowe	5. 7. 0	9	154	8 $\frac{1}{3}$	6 $\frac{1}{4}$	2 $\frac{1}{2}$
8 ×	30	1.18	Deltrintmo	Deltrintmodu	6. 7. 0	Deltrintmowe	6. 4. 0	14.06	150	9 $\frac{1}{3}$	8 $\frac{1}{8}$	2 $\frac{7}{8}$
8 ×	40	1.57	Delactimo	Delactimodu	8. 0. 0	Delactimowe	7. 16. 0	25	154	16 $\frac{3}{4}$	10	3 $\frac{3}{4}$
10 ×	50	1.97	Dekarmo	Dekarmodu	11.11. 0	—	—	25	87	18 $\frac{1}{2}$	10 $\frac{1}{2}$	—
12 ×	40	1.57	Telonarmo	Telonarmodu	8. 0. 0	Telonarmowe	7. 16. 0	10.9	73	15 $\frac{7}{8}$	10	3 $\frac{3}{4}$
16 ×	40	1.57	Telsexormo	Telsexormodu	8. 0. 0	Telsexormowe	7. 16. 0	6.25	55	15 $\frac{7}{8}$	10	3 $\frac{3}{4}$
18 ×	50	1.97	Delfortmo	Delfortmodu	12. 2. 0	—	—	7.84	49	16 $\frac{3}{4}$	12	—



VIEW
TELESCOPES
ASEROS

- 1 Table stand
- 2 Socket fitting
- 3 Clamping screw to the side motion
- 4 Clamping screw to the elevating motion
- 5 Clamping screw to the sleeve clamp
- 6 Objective cap
- 7 Extensible tube cap
- 8 Revolving collar for setting the telescope to the required magnification
- 9 Revolving collar with dioptric scale for setting the eyepiece to the observer's sight
- 10 Attachable yellow glass

48 mm. PORTABLE
HAND TELESCOPE
with magnifying powers
ranging continuously
from 4 to 20 times.

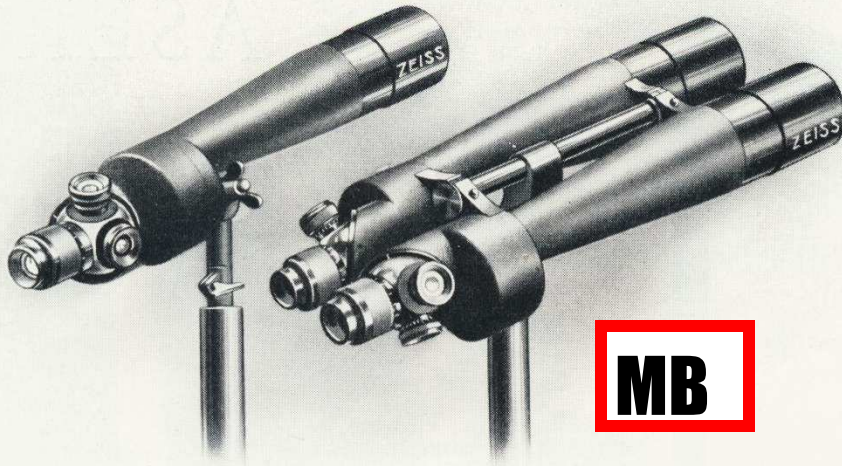
ASEROS mounted on table stand

THE ASEROS is a conveniently portable telescope with an objective 48 mm. in diameter, for use in the unsupported hands as well as mounted upon a table stand or a tripod stand. It is furnished with a variable image-erecting system of lenses, whereby an unbroken variation of the magnification within the limits of 4 and 20 times may be brought about by the rotation of a collar. As the magnification increases the image seemingly approaches the viewer continuously until the highest magnification of which the instrument is capable comes into play. This enables the viewer to adapt the magnification to the object to be viewed and to the prevailing conditions of the lighting. The ASEROS is likewise adapted for viewing the starry sky. It is powerful enough to see stars down to the ninth magnitude.

Further particulars will be found in our catalogue ASTRO 80 of Zeiss Telescopes for Terrestrial and Astronomical Observations.



V I E W T E L E S C O P E S



STARMOR

STARMORBI

STARMOR AND STARMORBI

Interchangeable Magnifications $12\times$, $24\times$ and $42\times$
60 mm. TELESCOPES FOR MONOCULAR AND BINOCULAR USE

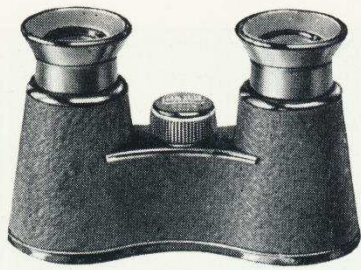
THE STARMOR and STARMORBI telescopes are fitted with revolving eyepiece changers furnished with three eyepieces for magnifications of $12\times$, $24\times$, and $42\times$. They may be mounted on table stands or on tripod stands. Thanks to their relatively small weight they may be carried about in the country for all manner of observations. Ships on the far horizon may be clearly identified, and far distant mountain ranges may be viewed in detail without effort. The STARMOR and STARMORBI telescopes are likewise available for stellar observations. The lunar craters, Jupiter's moons, the rings of Saturn, the crescent of Venus, double stars, etc. may be seen with them.

The ASTRO 80 catalogue contains exact particulars respecting these two and other ZEISS telescopes for terrestrial and astronomical observations, Stationary View Telescopes for use in villas, clubhouses, outlook stations on the seacoast commanding distant views, also instruments with coin-in-the-slot attachments for hotels, etc. The magnifications of these instruments range from 12 to 390 times.



ZEISS THEATRE GLASSES





THEATRE GLASS GALAN

Magnifying $2\frac{1}{2}$ times

Top illustration $\frac{1}{3}$ actual size



THE GALAN is a good and inexpensive theatre glass of the simple Galilean type. While magnifying $2\frac{1}{2}$ times, it shows a large bright and excellently sharp field of view. In its new and handy design it ensures dustproof protection to the internal parts. The old trouble-

some movable bridge of the opera glass of the past has been done away with, in consequence of which the glass may be brought close up to the eyes. The GALAN glass can accordingly be held far better in the hand, and is much more convenient for prolonged viewing. The twin focusing wheel in the model is freely movable and renders it easy to quickly set the glass to any sight and to any distance. The GALAN theatre glass is made in the elegant style and finish of the Zeiss field glasses and is supplied for three different distances between the eyes. The glass is supplied in a solid leather case with moiré lining or in a soft suede leather pouch.

GALAN with black leather case

with 61 mm. pupillary distance.....
with 64 mm. pupillary distance.....
with 67 mm. pupillary distance.....
Leather case only.....

Codeword	Price
GALANA	£ 3.10.0
GALAN	£ 3.10.0
GALANDO	£ 3.10.0
GALANDIS	£ 0. 5.6

GALAN with soft leather pouch

with 61 mm. pupillary distance.....
with 64 mm. pupillary distance.....
with 67 mm. pupillary distance.....
Leather pouch only

Codeword	Price
GALANAWE ..	£ 3.15.0
GALANWE	£ 3.15.0
GALANDOWE .	£ 3.15.0
GALANDUR ...	£ 0.10.6

OPTICAL PARTICULARS AND WEIGHTS

Model	Magnification	Effective Diameter of Objective		Diameter of the Exit Pupil mm.	Field of View in angular measure	Field of View linear at a distance of 100 ft. ft.	Weight of		
		mm.	in.				Field glass oz.	Leather Case oz.	Leather Pouch oz.
GALAN	$2\frac{1}{2} \times$	34	1.33	13.6	12°	21	8	$3\frac{3}{8}$	$2\frac{1}{2}$



PRISM THEATRE GLASS



TELEATER

Magnifying 3 times

Illustrations $\frac{1}{3}$ actual size



THE TELEATER glass is a prism glass for use in the theatre. It embodies the recognised advantages of the Zeiss field glasses, *viz* their excellent definition and brilliant viewing qualities, their great and uniform brightness and their exceptionally large field of view. All these qualities are realised within a small and daintily shaped instrument. It magnifies three times, which is the power best adapted for the purposes of the theatre. With the aid of the twin focusing wheel at the middle the glass can be focused with ease for near and distant. Moreover, like all other Zeiss field glasses, the TELEATER glass may be set to any distance between the user's eyes and also adjusted separately to either eye for any sight, so that every user is enabled to take the fullest advantage of the optical qualities of his glass. — The TELEATER is supplied in a variety of styles, particulars of which will be found in the succeeding page. Men, in the great majority of cases, give preference to the plainer model, which is elegantly finished in black after the manner of the Zeiss field glasses. For the use of ladies models are provided with fine brown leather covering and gilt metal fittings and also mother-of-pearl covered models with or without handle. These models are supplied in stiff leather cases lined with moiré suited to the style of the glass, soft leather pouches or beaded bags. Particulars, codewords, and prices will be found on the next page.

OPTICAL PARTICULARS AND WEIGHTS

Model	Magnification	Diameter of the Objective		Diameter of the Exit Pupil	Light transmitting capacity	Field of View		Weight of		
		mm.	in.			mm.	in angular measure	linear in feet at 100 ft.	Glass Field oz.	Leather Case oz.
TELEATER ..	3 ×	13.5	0.53	4.5	20.25	13.7°	24	7½	4½	2⅓

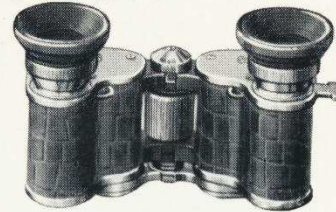
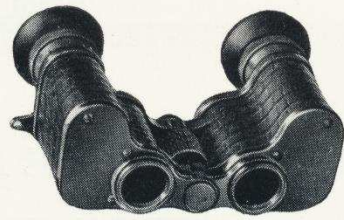


PRISM THEATRE GLASS

TELEATER

Magnifying 3 times

STYLE: BROWN AND GILT, WITH AND WITHOUT HANDLE



1/3 actual size



The TELEATER is supplied in the styles and with the accessories specified below:

A. Standard elegant black finish of the Zeiss field glasses with accessories comprising:

- Black leather case and silk cord
- Soft brown leather bag and silk cord
- Coloured beaded bag and silk cord

Codeword	Price
TELEBOLO ...	£ 8.11.0
TELEDAMUS .	£ 8.11.0
TELETAS	£ 8.11.0

B. Gilt metal fittings and *de luxe* leather covering, with accessories, viz.:

- Appropriate brown leather case and silk cord....
- Soft brown leather bag and silk cord
- Coloured beaded bag and silk cord

Codeword	Price
TELEBA	£ 9.13.0
TELEBOES....	£ 9. 3.0
TELESILLA ...	£ 9. 3.0

C. Ditto, together with extensible and detachable handle and accessories, viz.:

- Appropriate brown leather case and silk cord ...
- Soft brown leather bag and silk cord
- Coloured beaded bag and silk cord

Codeword	Price
TELEBAMI....	£ 12. 2.0
TELEBOESMI .	£ 11. 2.0
TELESILLAMI.	£ 11. 2.0

D. *De luxe* Teleater: Gilt metal fittings and fine mother-of-pearl covering, and accessories, viz.:

- Brown *de luxe* leather case
- Soft brown leather bag
- Coloured beaded bag

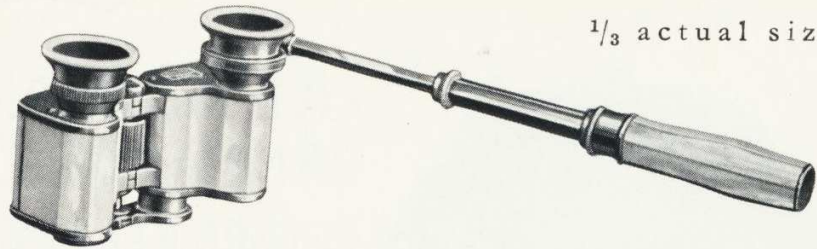
Codeword	Price
TELEPERLON	£ 12. 2.0
TELEBEUTON	£ 11.12.0
TELEPLUSON.	£ 11.12.0

E. Ditto, mother-of-pearl and gilt fittings, together with permanently attached extensible handle and accessories, viz.:

- Brown *de luxe* leather case
- Soft brown leather bag
- Coloured beaded bag

Codeword	Price
TELEPERL ...	£ 14.17.0
TELEBEUT ...	£ 13.17.0
TELEPLUS ...	£ 13.17.0





1/3 actual size

PRISM THEATRE GLASS TELEATER

Magnifying 3 times

STYLE: TELEPERL / GILT, WITH
MOTHER OF PEARL COVERING AND PERMA-
NENTLY ATTACHED EXTENSIBLE HANDLE

TELEATER ACCESSORIES

The subjoined accessories are supplied as integral parts of the TELEATER equipment. They may be obtained separately, as follows:

	Codeword	Price
Black silk cord for suspension from the neck with two swivel clips	TELETICO	£ 0. 1.6
Soft brown leather pouch	TELESIA	£ 0.15.0
Black solid shagreen leather case	TELEBLACK	£ 0.15.0
Brown solid fancy leather case	TELEMACO	£ 1. 5.0
Ditto, larger, with space for the handle	TELEMACIT	£ 1.15.0
Coloured beaded bag	TELETEL	£ 0.15.0
Handle, gilt and leather covered	TELEGRIF	£ 1.19.0
Handle, gilt and mother-of-pearl	TELESTIL	£ 2. 4.0



Beaded bag

Leather bag

Leather case



RENEWAL PARTS AND ACCESSORIES FOR FIELD GLASSES

Containers: As will have been seen from the particulars relating to the individual field glasses described on the preceding pages, each field glass is furnished with a solid leather sling case, brown or black, together with a shoulder strap attached to the glass. Soft brown suede leather pouches may be selected in place of the solid leather cases. The cases may be obtained at any time after the purchase of a glass.

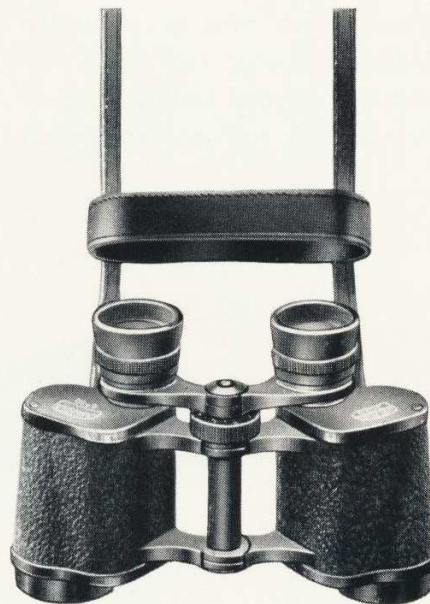
Codeword for a **brown** solid leather sling case TEBA
 Codeword for a **black** solid leather sling case TEDU
 To this should be added the codeword name of the field glass in question.
 Prices according to size, *e. g.* that of the case for the Silvamar, Silvarem, Deltrentis, and Deltrintem is £ 1.1.0

A **Compass** provides a useful means of finding one's bearings in the country. It is attached to the cover of the case and is fitted with a stout mounting ring to protect it from damage and from the access of rain and dust. This ring serves likewise for clamping the compass needle. When the instrument is not required for use the ring should be turned to the right, while a turn to the left releases it.

Codeword for a Compass KOMPASS
 When ordered together with the field glass,
 its price is £ 0.12.6
 When ordered subsequently it is £ 0.15.6

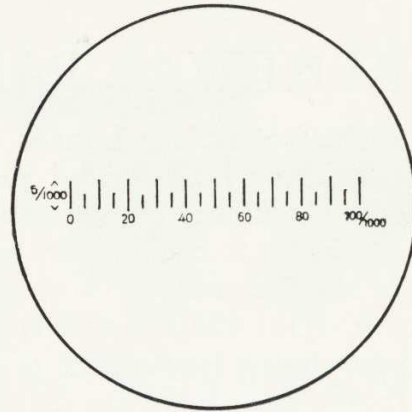
The **Rainguard** serves to protect the eyepieces from rain when hunting, etc. It attaches to the shoulder strap. When the field glass is not in use it lies flat upon the two eyepieces. When the glass is to be held to the eyes it should be pushed back.

Codeword REGENKLAPP
 Price £ 0.3.6





RENEWAL PARTS AND ACCESSORIES FOR FIELD GLASSES



The **Graticule** serves for estimating distances when the view includes objects of a known size or for estimating heights or widths where the distance is known, for instance the width of a wood, the height of a tower or that of a mountain peak. It is of service to surveyors, balloonists, flying men, and is frequently welcome to forest inspectors, hunters, tourists, path finders, etc. as well as in conjunction with certain sports. The graticule is for this purpose mounted within the body of one of the component telescopes so that the lines may be seen clearly as though part of the landscape. In the standard arrangement of the graticule, as here shown, the interval between two scale lines conforms to 5 yards per 1000 yds. of distance, while the length of a long division line corresponds to a height of 5 yds., that of a short line to 2½ yds. per 1000 yds. of distance.

Codeword TELSTRI

Price of the graticule including fitting **£ 1.10.0**

Graticules of special design are subject to a higher price.

The **eyepiece cups** are liable to break in the event of the glass being dropped or severely knocked. When ordering renewals, please state the factory number on the field glass.

Price of a renewal eyepiece cup, *e.g.* for the SILVAMAR glass **£ 0.3.6**

Shallow eyepiece cups for spectacle wearers, when ordered at the time of purchasing a field glass, may be supplied in the place of the usual eyepiece cups without additional cost. If ordered subsequently, the charge is as stated above.

When ordering a field glass with shallow eyepiece cups append to the codeword the syllable FLA or FLU, as the case may be, thus:

SILVAMAR with shallow eyepiece cups and **brown** solid leather case SILVAMARFLA

SILVAMAR with shallow eyepiece cups and **black** solid leather case SILVAMARFLU

SILVAMAR with shallow eyepiece cups and **soft** pocket pouch SILVAMARWEFLA

RENEWAL PARTS AND ACCESSORIES

Sight Correcting Lenses for spectacle wearers. To pronouncedly near-sighted or long-sighted persons, but more especially to those afflicted with pronounced astigmatism, we recommend the use of attachable spectacle lenses to enable them to view without their spectacles, if they wish to do so. The mounts of the sight correcting lenses are respectively marked R (for right) and L (for left). When ordering astigmatic lenses, the oculist's prescription (stating the position of the axes) should be furnished.

In addition, there are on each mount two points, which, however, must not be taken to indicate the position of the cylindrical axes. They are merely lines of orientation. The sight correcting lenses should be so attached that the four points may lie in one straight line.

Codeword for a pair of correcting lenses TELECORECT
Specify, when ordering, the field glass in question. Price per pair £ 0.15.6

Yellow Glasses are used in glaring light. They enhance the power of distinguishing details which would be swallowed up in a flood of excessive light. They slip upon the eyepieces of the field glasses.

Codeword for a pair of yellow glasses GELBGLASER
When ordering, name the field glass in question. Price per pair £ 0.8.0

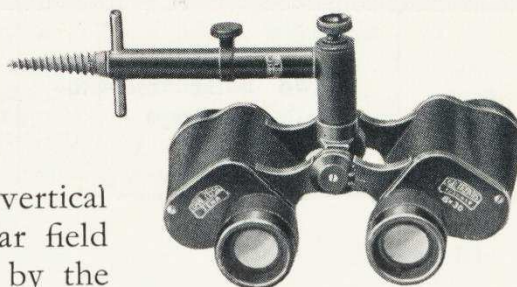
Sunglasses. These are moderating glasses of a dense neutral tint glass which allow but little light to pass. They are mounted to slip upon the eyepieces like the above mentioned yellow glasses and sight correcting lenses. They may be employed for viewing the formation of spots on the sun's surface and such like, and are useful for observing solar eclipses. For the latter purpose it is best to use the lighter grade, while the denser grade should be used for prolonged observations.

Codeword for a pair of Sun Glasses:
"Light" grade TELSOHE
"Dark" grade..... TELSODU
When ordering, name the field glass in question.
Price per pair..... £ 0.8.0

Tree screws and Stands. Field glasses having a high magnifying power are correspondingly heavy. A prolonged effort of holding glasses of this kind steadily in the hands is very fatiguing, and the resulting tremor of the hands appears greatly exaggerated in the field of view. For use with these high-power glasses we recommend accordingly tree screws or stands.



The **Tree Screw** can be easily screwed into trees, wooden uprights and such like. An instrument attached thereto may then be freely directed up and down and from side to side, and the vertical movement may be clamped. Binocular field glasses are held in these tree screws by the middle hinge. In the case of those binocular field glasses which have no hinge (Dekar, Delfort) the tree screw is furnished with an appropriate fitting.



Codeword for the Tree Screw for binocular field glasses TELARBOR
When ordering, name the field glass in question. Price £ 1.15.6

The **Table Stand** is a neat yet very steady iron stand 14½ inches high with three feet and a standard socket pin for the reception of a stockhead, of which a description is given below. This table stand can only be used with a stockhead.

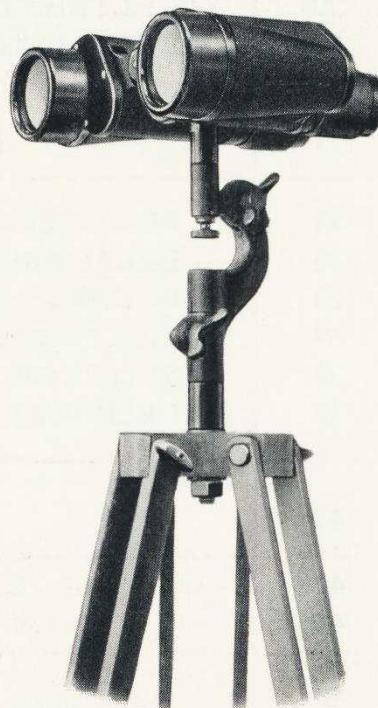
Codeword for the table stand only: TESTI Price £ 2.4.0

The **Wooden Stands** are light but very rigid folding tripod stands of proved design. They are supplied with a canvas container. These stands likewise require a stockhead for use with field glasses.

Codeword for the wooden stand
together with canvas container TELESTA*)
Price £ 2.4.0

The **Stockhead** slips upon the standard pin of the table stand or wooden tripod stand. It grips the field glass, in a similar way as the tree screw, by its hinge pin and admits of the glass being freely pointed in all directions and clamped in any desired position. For binocular field glasses without a hinge (Dekar, Delfort) an appropriate fitting is provided with the stockhead.

Codeword for a Stockhead TELEAUF*)
Price £ 1.19.0



*) See also the codewords appended to the illustrations of the field glasses. Where no special codewords are stated use should be made of the above codewords and the code name of the field glass in question appended thereto.

OPTICAL PARTICULARS AND WEIGHTS

Page	In hard brown leather case with leather straps Codeword	In hard black leather case with leather straps Codeword	In soft leather pouch Codeword
13	M I N I A T U R E -		
14	TELITA	—	TELITawe
16	TURITA	—	TURITawe
18	TURMON	TURMONDU	(monocular)
19	U N I V E R S A L		
20	TUROLEM	TUROLEMDU	TUROLEMWE
22	TELEX	TELEXDU	TELEXWE
22	TELEXEM	TELEXEMDU	TELEXEMWE
24	SILVAMAR	SILVAMARDU	SILVAMARWE
24	SILVAREM	SILVAREMDU	SILVAREMWE
26	TURACT	TURACTDU	TURACTWE
26	TURACTEM	TURACTEMDU	TURACTEMWE
28	DELTURIS	DELTURISDU	DELTURISWE
28	DELTURISEM	DELTURISEMDU	DELTURISEMWE
30	DELTRENTIS	DELTRENTISDU	DELTRENTISWE
30	DELTRINTEM	DELTRINTEMDU	DELTRINTEMWE
33	F I E L D G L A S S E S F O R		
34	BINOCTAR	BINOCTARDU	—
35	DELACTIS	DELACTISDU	—
36	DEKAR	DEKARDU	—
37	TELONAR	TELONARDU	—
38	TELSEXOR	TELSEXORDU	—
39	DELFORT	DELFORTDU	—
43	T H E A T R E		
44	—	GALAN	(see page 44)
45	—	TELEATER	(see pages 45—48)
40	M O N O C U L A R		

OF THE ZEISS FIELD GLASSES

Linear Magnification	Effective Diameter of the Objectives		Exit Pupil mm.	Light transmitting power	Field of View		Field Glass oz.	Weight of	
	mm.	in.			in angular measure	linear, at a distance of 1000 yds.		hard leather case with straps oz.	soft leather pouch oz.

F I E L D G L A S S E S

6 ×	18	0.71	3	9	8.3°	145	10	3 1/4	2 3/8
8 ×	24	0.94	3	9	6.3°	110	15	4 5/8	3 1/2
8 ×	21	0.83	2.6	6.76	6.3°	110	3 1/2	7/8	—

F I E L D G L A S S E S

4 ×	20	0.79	5	25	10.3°	182	10 1/2	8 2/3	2 1/2
6 ×	24	0.94	4	16	8.5°	150	16 3/4	10 1/2	4
6 ×	24	0.94	4	16	8.5°	150	19 1/2	10 1/2	4
6 ×	30	1.18	5	25	8.5°	150	19	11 3/4	4
6 ×	30	1.18	5	25	8.5°	150	21 3/4	11 3/4	4
8 ×	24	0.94	3	9	6.3°	110	13 3/4	11 1/8	3 1/2
8 ×	24	0.94	3	9	6.3°	110	15 7/8	11 1/8	3 1/2
8 ×	24	0.94	3	9	8.75°	154	19 3/4	10 1/2	4
8 ×	24	0.94	3	9	8.75°	154	20 1/8	10 1/2	4
8 ×	30	1.18	3.75	14.06	8.5°	150	21 1/4	11 7/8	4
8 ×	30	1.18	3.75	14.06	8.5°	150	23 7/8	11 7/8	4

S P E C I A L P U R P O S E S

7 ×	50	1.97	7.1	50.4	7.3°	128	40 1/4	22	—
8 ×	40	1.57	5	25	8.75°	154	36 3/4	20	—
10 ×	50	1.97	5	25	5°	87	40 1/4	22 1/4	—
12 ×	40	1.57	3.3	10.9	4.2°	73	37	19	—
16 ×	40	1.57	2.5	6.25	3.16°	55	35	19	—
18 ×	50	1.97	2.8	7.84	2.8°	49	38 1/2	25 1/2	—

G L A S S E S

2 1/2 ×	34	1.33	13.6	185	12°	210	8	3 3/8	2 1/2
3 ×	13.5	0.53	4.5	20.25	13.7°	240	7 1/2	4 1/2	2 3/8

F I E L D G L A S S E S (see table page 40)



ZEISS OPTICAL INSTRUMENTS

Catalogues on any of the following Zeiss Instruments may be had free on application.

SPECTACLE LENSES AND SPECTACLES

Punktal Spectacle Glasses, URO-Punktal Glasses, Umbral-Glasses, Katral Cataract Glasses, Lens Attachments converting ordinary glasses into bi-focals, Telescopic Spectacles for the extremely weak-sighted.

MAGNIFIERS

Monoculars and Binocular Magnifiers, Spectacle Magnifiers, Telescopic Magnifiers, Folding Magnifiers, Reading Glasses, Picture Viewers.

PHOTOGRAPHIC OBJECTIVES

Tessars, Double Protars, Convertible Protars, Planars, Tele-Tessars, Telephoto-Attachments, Distars, Protars, Yellow Screens, Ducar Filters, Reversing Prisms, Light Filter Troughs, Focusing Lenses, etc.

STEREOSCOPIES

MICROSCOPES

and Microscope Accessories, Apparatus for ultra-microscopic observations and darkground illumination, Photo-micrographic Apparatus for visible and ultraviolet light.

PROJECTION APPARATUS

Episcopes, Epidiscopes.



RIFLE SIGHTING TELESCOPES

ASTRONOMICAL TELESCOPES

Astronomical Accessories, Astronomical and Astro-photographic Objectives, Observatory Domes.

MEDICAL INSTRUMENTS

Ophthalmoscopic and Endoscopic Instruments, Illuminating Appliances for Operating Theatres.

APPARATUS FOR ILLUMINATION

and for Light Therapy.

SURVEYING INSTRUMENTS

Levels, Tacheometer Levels, Self-Reducing tacheometers, Theodolites, Alidades (Graphometers), Levelling Staves, Optical Squares, etc.

OPTICAL MEASURING INSTRUMENTS

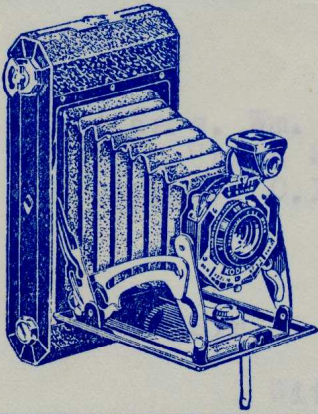
Photo-theodolites, Stereocomparators, Microcalipers, Reading Microscopes, Comparators, Spectroscopes, Spectrographs, Refractometers, Interferometers.

MICROMETER TOOLS

Screw Gauges, Depth Gauges, Optimeters, Micrometer Dial Gauges, etc.

SEARCH LIGHTS

for Motor Cars, Motor Cycles, Water-Craft, Railways, etc.



WM. BLACKADDER

101 UNION STREET

ALSO AT 13 WEST NILE STREET
AND 236 ARGYLE STREET

GLASGOW, C.1.

AND 202 HIGH STREET, PERTH



DEVELOPING & PRINTING WORKS: TITWOOD ROAD, GLASGOW

11th. November, 1936

H.R.J. Conacher, Esq.,
Ann Pharaid,
Lawmarnock Road,
Bridge of Weir.

Yours faithfully,

Carl Zeiss (London) Ltd.,

Dear Sir,

I have much pleasure in enclosing herewith copy of letter received from Messrs. Carl Zeiss.

Assuring you of my best attention at all times.

I am,
Yours faithfully,

per Wm. Blackadder,

Copy.

Messrs. Wm. Blackadder,
101, Union Street,
Glasgow, C.1.

Dear Sir,

With reference to your order No. B211, we beg to advise you that we can supply an attachment lens for the Teletur 6 x 15 binocular to convert this into a monocular telescopic magnifier. The cost of such an attachment would be £2.12.0d.

We do not know whether a prismatic attachment lens to convert the Teletur into a binocular telescopic magnifier can still be supplied, and it will be necessary for us to write to Messrs. Carl Zeiss, Jena, on this matter. In any case, the attachment lens will have to be specially made, and before putting the order in hand, we shall be glad if you will kindly inform us of the manufacturing number of the glass and also the outside diameter of the objective cells.

Trusting to receive this information in due course.

Yours faithfully,

Carl Zeiss (London) Ltd.,