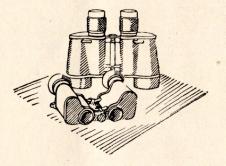
Printed in Germany



ZEISS FIELD GLASSES





CARLZEISS / JENA





CARL ZEISS / JENA 1923

BRANCHES at BERLIN,

HAMBURG, VIENNA, BUENOS AIRES and TOKYO

DISTRIBUT NG AGENTS at LONDON, PARIS, MILAN, MADRID, NEW YORK, MONTREAL, MELBOURNE, CALCUTTA, SHANGHAI etc.

For Prices see Price Slip.

Zeiss Field Glasses may be obtained at original prices from dealers in optical goods.

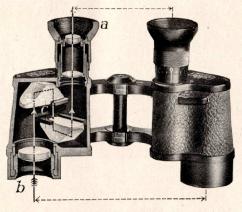
For the exact identification of an instrument the respective codeword should be quoted.

CONTENTS	Page
Preface	. 3
Advantages of the Zeiss Field Glasses	. 5
Hints of the choice of a Zeiss Field Glass	. 6
Table of weights and optical particulars	. 8,9
Plates furnishing a comparison of the respective fields of view	12 - 14
Field Glasses with Independently Focussing Eyepieces	. 15-29
Look = out Telescopes	. 30
Field Glasses with Twin Focussing Mechanism	.31 - 39
Monocular Field Glasses	
"Teleater" Theatre Glasses	.41 - 43
Field Glass Accessories	.44 - 46
Telescopic Magnifiers, Telescopic Microscopes	. 47
List of Catalogues	. 48



PREFACE

THE invention of the principle of the reversing prism and its application to the telescope, which brought about the evolution of the modern field glass, is the indisputable achievement of Abbe and the Zeiss Works, at the head of



Trace of the rays through a Zeiss Field Glass
a) Eyepiece b) Objective c) Prism

which he stood. It matters little that the priority of the idea has since been contested and traced to other sources, notably to PORRO. Abbe's title to the whole credit for the invention is not thereby challenged as all previous attempts to embody

1/16



the theoretical principle proved so entirely unsuccessful that the very idea had sunk into oblivion.

The successful application of this principle enabled us incidentally to endow the field glasses with a new and valuable quality, in that the prisms furnished a means of setting the objectives farther apart than the eyes. The effect thereby obtained is comparable to that which would result from an increase of the distance between the eyes. The enhanced stereos scopic effect obtained by this means is such that even distant objects stand out in solid contours.

THE HIGH OPTICAL PERFORMANCE

of the prism field glass was made possible by the use of special optical glass made by the Jena Glass Works of Schott & Gen. This glass is endowed with such a high degree of transparency that there is no appreciable falling off in the intensity of the transmitted light.

The loss of light due to reflection at the successive prism and lens surfaces is somewhat greater in the prism glasses than with the ordinary glasses of the Galilean type without prisms. This is inevitable in view of the greater number of surfaces which the light has to traverse within the prism glasses. This loss is, however, of no consequence in comparison with the greatly increased size of the field of view and the much more even distribution of the light.

These two significant qualities were sufficiently striking from the very first to enable the Zeiss Field Glasses to everywhere supersede the older glasses without prisms.





WIDE: ANGLE PRISM BINOCULARS

In the best types of field glasses as hitherto made the field of view as obtained through the eyepieces embraced an angle of 400 to 500. Recently a new series of wide angle prism glasses has been added in which this angle has been extended to 70°. This result has been achieved by new patented forms of eyepieces computed by Dr. H. Erfle, of the Zeiss Works. The field of view of the prism glasses, remarkably large as it already was, has thereby been still further extended. There is no doubt that this extension of the field of view signifies a further notable advance in the construction of the modern field glass. In daylight, and still more so in failing light, such a large field of view is a valuable asset and a great convenience as it enables the eye to locate an object much more quickly and renders it easy to follow and watch a swiftly moving object. We need in this connection only mention the greater ease with which deer on the run, the rapidly shifting scenes of the race course, boat racing events, and indeed any form of sport can be followed.

THE ADVANTAGES OF THE ZEISS FIELD GLASSES

The Zeiss Field Glasses are now so well known for their superb defining qualities, their great light transmitting capacity, their large field of view, their mechanical excellence, and their pleasing and handy form and elegant finish that it would seem unnecessary do dwell upon these many features,



all of which have helped to build up the reputation possessed by the Zeiss Field Glasses. In the following pages we propose to briefly describe under a separate heading for each model its special features together with the range of uses for which it is best adapted.

HINTS ON THE CHOICE OF A ZEISS FIELD GLASS

It is impossible to design an allround field glass which shall be equally well adapted for every imaginable purpose. The requirements of hunters, tourists, and theatre goers are fundamentally different. Thus, for the theatre a magnification of $3\times$, as obtained with the *Zeiss Teleater*, is both ample and best, though in very large theatres when seated very far away from the stage it may be occasionally desirable to use a more powerful glass. For out of door use it is imperative that the magnifying power should exceed $3\times$.

BY MAGNIFICATION

we understand the ratio between the size of an object as it appears when seen through the glasses and its size as seen with the unaided eyes. This will be easily understood by reference to the plates on pages 12 to 14, which show the fields of view of the various models. These plates demonstrate the effect of magnification, though naturally the photographic reproductions give a far from adequate idea of the brilliant picture as actually presented by the glasses. It is not usual to choose a higher magnifying power than is required for a given purpose. It should be remembered that the slightest tremor of



the hands is transmitted to the magnified image and becomes more and more pronounced in a measure as the magnification rises. It is therefore not advisable to go beyond a magnifying power of $8 \times$ so long as the glasses are intended to be held in the unsupported hands. Some practised hands are able to hold steadily a field glass of a power of $10 \times$, but when this power is exceeded it becomes in all cases necessary to rest the arms on supports or to mount the glasses on a stand or screw them to a support, if any advantage is to be derived from the higher magnification.

A high magnification is not only useful for recognising small objects from a great distance, but also determines largely the condition of lighting. Apart from the light* transmitting power of a glass, its magnification has a marked influence upon the ease with which objects can be seen in failing light. Details which the unaided eye readily distinguishes in full daylight can only be recognised in a declining light by reason of the magnifying power of the field glass, provided always that the object has been located. It is in such cases as these that the new Zeiss Wide*angle Field Glasses prove doubly useful thanks to their high magnification of 8 diameters and their very large field of view, which is equal in size to that formerly obtainable only with the lower power of 6×.

THE LIGHT, TRANSMITTING CAPACITY

should naturally be as high as possible, especially in the case of so-called "night glasses". Apart from the degree of transparency of the field-glass the light transmitting capacity is

Continued page 10







WEIGHTS AND OPTICAL PARTICULARS OF THE ZEISS FIELD GLASSES

Description	leather case with leather straps	leather case with leather straps	In soft leather pouch	Linear Magnia fication	Diar of the O	neter bjectives	Exit Pupil	Light Transs mitting Power	in angular measure	in terms of linear measure at a distance of 1000 yds.	of Field Glass	Weight of hard leather case with straps	of soft leather pouch
	Codeword	Codeword	Codeword		mm.	inch.	mm.			yas.	02.	02.	02.
	FIELD (GLASSES W	VITH INDI	EPEND	ENT I	FOCUS	SING	EYEP	IECES				
Small travelling glass Folding binocular Light tourist glass Universal glass Universal glass Hunting and marine glass Marine or night glass Sporting and travelling glass Wide-angle, for travelling Wide-angle, for ravelling Wide-angle, forraces, marine and hunting Powerful marine glass High power glass High power glass High power glass	Turol Stenor Turex Telex Silvamar Binoctar Turact Delturis Deltrentis Delactis Dekar Telonar Telsexor Delfort	Turolba — Turexba Telexba Silvamarba Binoctarba Turactba Delturisba Deltrentisba Delactisba Dekarba Telonarba Telsexorba Delfortba	Turolwe Stenorwe Turexwe Telexwe Silvamarwe — Turactwe Delturiswe — — — — — — — — — — — — — — — — — — —	4× 5× 6× 6× 7× 8× 8× 8× 10× 12× 16× 18×	20 12 21 24 30 50 24 24 30 40 50 40 50	0.79 0.47 0.83 0.94 1.18 1.97 0.94 0.94 1.18 1.57 1.57 1.57	5 2.4 3.5 4 5 7.1 3 3.75 5 3.3 2.5 2.8	25 5.76 12.25 16 25 50.4 9 9 14.06 25 25 10.9 6.25 7.84	10.30 8.30 8.50 8.50 8.50 7.30 6.30 8.750 8.750 4.20 3.160 2.80	182 145 150 150 150 128 110 154 150 154 87 73 55	91/8 71/2 101/8 151/8 21 385/8 135/8 171/2 225/8 381/4 415/8 351/8 333/8 361/2	73/8 21/2 73/4 101/8 125/8 225/8 115/8 97/8 125/8 191/8 207/8 185/8 185/8 233/8	3 21/2 35/8 51/8 51/8 51/8 — 45/8 51/8 — —
		TW	IN FOCUS	SING	FIELD	GLAS	SES						
Operaglass "Teleater" Theatre and travelling glass Small, light tourists glass Tourists glass Universal glass Hunting and marine glass Sporting and travelling glass Wide-angle, for travelling Wide-angle, for universal use	Turolem Teletur Turexem Telexem Silvarem Turactem Delturisem Deltrintem	Turolemba Teleturba Turexemba Telexemba Silvaremba Turactemba Delturisemba	Turolemwe Teleturwe Turexemwe Telexemwe Silvaremwe Turactemwe Delturisemwe	3× 4× 6× 6× 6× 8× 8× 8×	13.5 20 15 21 24 30 24 24 24	0.53 0.79 0.59 0.83 0.94 1.18 0.94 0.94	4.5 5 2.5 3.5 4 5 3 3 3.75	20.25 25 6.25 12.25 16 25 9 9 14.06	13.70 10.30 7.10 8.50 8.50 8.50 6.30 8.750 8.50	24 yds. on 100 yds. 182 123 150 150 150 110 114 154	73/8 101/8 73/8 115/8 171/8 231/8 153/8 195/8 241/2	41/2 73/s 51/s 73/4 101/s 125/s 115/s 97/s 125/s	23/4 3 25/8 35/8 51/8 51/8 41/2 51/8 51/8
MONOCULAR FIELD GLASSES													
Universal glass . Hunting and marine glass . Night glass . Sporting and travelling glass . Wide-angle, for travelling . Wide-angle for universal use . Wide-angle hunting and marine glass . Powerful marine glass . High power glass . High power glass . High power glass .	Telexmo Simpsilv Binoctarmo Simplact Delturmo Deltrintmo Delactimo Dekarmo Telonarmo Telsexormo Delfortmo		Telexmopo Simpsilvpo — Simplactpo Delturmopo Deltrintmopo Delactimopo — Telonarmopo Telsexormopo	6× 6× 7× 8× 8× 8× 10× 12× 16× 18×	24 30 50 24 24 24 30 40 50 40 50	0.94 1.18 1.97 0.94 0.94 1.18 1.57 1.97 1.57	4 5 7.1 3 3 3.75 5 5 3.3 2.5 2.8	16 25 50.4 9 9 14.06 25 25 10.9 6.25 7.84	8.50 8.50 5.70 6.30 8.750 8.750 8.750 4.20 3.160 2.80	150 150 100 110 154 150 154 87 73 55 49	73/8 103/4 173/4 91/8 83/4 101/2 161/2 195/8 171/8 207/8	7 83/8 97/8 73/8 77/8 81/4 103/4 113/8 103/4 135/8	21/2 31/8 3 31/8 31/8 4 4 4
	Small travelling glass Folding binocular Light tourist glass Universal glass Hunting and marine glass Marine or night glass Sporting and travelling glass Wide-angle, for travelling Wide-angle, for universal use Wide-angle, forraces, marine and hunting Powerful marine glass High power glass High power glass High power glass High power glass Universal glass Universal glass Universal glass Sporting and travelling glass Sporting and travelling glass Wide-angle, for travelling Wide-angle, for universal use Universal glass Universal glass Universal glass Universal glass Hunting and marine glass Sporting and travelling glass Wide-angle, for travelling Wide-angle, for universal use Universal glass Hunting and marine glass Night glass Sporting and travelling glass Wide-angle, for universal use Wide-angle hunting and marine glass Powerful marine glass High power glass High power glass	Description leather case with leather straps	with leather straps Codeword FIELD GLASSES V Small travelling glass Folding binocular Light tourist glass Universal glass Universal glass Marine or night glass Sporting and travelling glass Wide-angle, for travelling Powerful marine glass High power glass High power glass Tourists glass Tourists glass Tourists glass Tourists glass Tourist glass Tourist glass Tourist glass Tourists glass Tourist glass Tourists glass Tourist glass Tourists glass Tourist glass T	Description Ieather case with leather straps Soft leather pouch	Description Icather case with leather straps Codeword Codeword Codeword Codeword	Description Ieather case with leather straps Codeword Code	Description	Description	Description	Description	Description	Description	Description



governed by the diameter of its exit pupil. By a generally accepted convention the square of this diameter expressed in millimetres supplies a geometric measure of the light transmitting capacity. The exit pupil is the small circle of light which is seen when the field glass is held against the clear sky and the eye looks through it at a distance of about 10 inches from the eyepiece. — With any increase of the magnification and the exit pupil the object glasses must likewise be increased in size. Obviously, there is a corresponding increase in the weight of the glasses. For this reason no attempt has been made to increase the size of the exit pupil of the 8× field glass beyond 5 mm., though for use in special cases where the question of weight does not enter into consideration a field glass with a magnifying power of 8× has been made at the Zeiss Works with an exit pupil of 7.5 mm.

THE FIELD OF VIEW

of a field glass may be found by dividing the angular measure of the field of the eyepiece — i. e. 40 to 50°, or 70° as the case may be — by the magnifying power of the field glass. In addition to the angular measure so obtained the size of the field of view is given for each field glass in terms of linear measure, viz in terms of the width of the objects comprised in the view at a distance of 1000 yards. The plates on pages 12 and 13 show the field of view of the different Zeiss Field Glasses and incidentally demonstrate their striking superiority in this respect over the Galilean type of binoculars without prisms. The greatly extended field of view of the Widesangle field glasses is shown on page 14.

THE EXTERNAL FORM

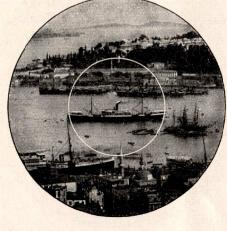
of the Zeiss Field Glasses in the main continues to conform to the original type of Zeiss prism glass with distended objectives. Only the 3× Zeiss Theatre Glass TELEATER and the 6× Tourist Glass TELETUR have their objectives placed closer together than their eyepieces. The object of the contracted design is to obtain exceptionally small and compact models. The "4×20" and the "6×21"*) models, on the other hand, have their objectives and eyepieces practically the same distance apart. The form of all these glasses therefore differs somewhat from the standard pattern of the Zeiss field glasses. They are for this reason shown in this catalogue in two positions.

Regarding the use of field glasses for viewing near objects as well as their conversion into telescopic magnifiers and telescopic microscopes the reader is referred to page 47. These novel applications of the principle of the prism telescope, which have likewise emanated from the Zeiss Works, have rendered the prism glasses available for many important uses inscience, industry and art, as well as for educational purposes.

^{*)} This notation signifies the product of the magnifying power into the diameter of the objective and is generally used for identifying field glasses by their opetical features. When ordering, however, it will be found more convenient and less liable to error to quote the codeword appended in this catalogue to the specification of each field glass.



Zeiss Field Glasses "Turol" and "Turolem" Magnifying 4 times





Zeiss "Binoctar" Field Glasses Magnifying 7 times

PLATE SHOWING THE FIELDS OF VIEW ENCOMPASSED BY THE VARIOUS TYPES OF FIELD GLASSES

The area within the small inscribed circle represents the field of view of a Galilean glass of equivalent magnification.

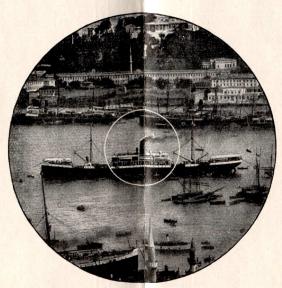
The large circular area represents the field of view of the respective Zeiss Field Glasses as it appears to the eye.

The field of view of the new Zeiss Wide-angle Field Glasses is shown on the next page.

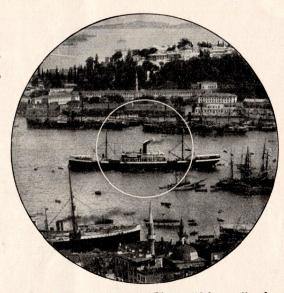




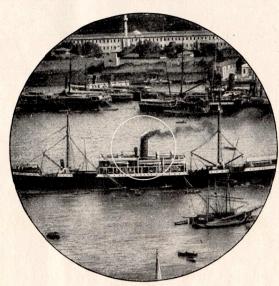
View of Constantinople as it appears to the naked eye



Zeiss Field Glasses "Turact" and "Turactem" Magnifying 8 times

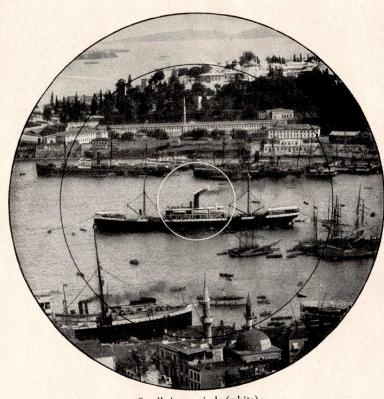


Zeiss Hunting and Marine Glasses "Silvamar" and "Silvarem" - Magnifying 6 times



Zeiss "Telonar" Field Glasses Magnifying 12 times





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.

The whole: The field of view of the ZeissWide angle Field Glasses, magnifying 8 times.

ZEISS WIDE: ANGLE FIELD GLASSES

The Zeiss Wide angle Field Glasses add to the field of view of the 8 power prism field glasses an area almost as large as the whole field hitherto obtained.

The Zeiss Wide angle Field Glasses combine with their poswerful magnification of 8 diameters a field of view as large as hitherto obtained with the best 6 power prism glasses only.

See also Fields of View shown on pages 12 and 13.



FIELD GLASSES WITH INDEPENDENT FOCUSSING EYEPIECES

These field glasses are exceedingly convenient in practical use. They can be rapidly set to the user's sight, which frequently differs in the two eyes, by the aid of the scale of diopters and index with which the eyepieces are provided. There is then no need to change the adjustment after the glasses have been once sharply focussed for a distant object.

The independent focussing eyepieces admit of the bodies of the telescopes being enclosed in a perfectly dustproof and moistureproof casing, which renders them adapted for use under any climatic conditions, notably in the tropics.



TUROL

Magnifying 1 times

Small Travelling Glass



Great light transmitting power. Large field of view Small weight and bulk

In black stiff leather case with shoulder strap Codeword: Turol In brown stiff leather case with shoulder strap Codeword: Turolba In suède leather pouch Codeword: Turolwe

For Prices see Price Slip

	Effective		Dia=	Light	Field	of View in terms	Weight			
Magnis fication	Dian	neter of ective	meter of Exit Pupil	Trans- mitting Power	in angus lar meas sure	of yds. at a diss tance of 1000 yds.	of Field Glass	of Hard leather Case	of Soft leather Pouch	
	mm.	in.	mm.				oz.	oz.	oz.	
4×	20	0.79	5	25	10·3°	182	91/8	73/8	3	



STENOR

Magnification 5 times

Vest Pocket Binocular



1/3 Full Size

Folds flat to fit into the pocket or handbag



Folded

1/3 Full Size

In black stiff leather case	 Codeword: Stenor
In suède leather pouch	 Codeword: Stenorwe

Magnia fication	Diar	cti ve neter of ective	Dia≠ meter of Exit Pupil mm.	Light Transs mitting Power	Field in angus lar meas sure	of View in terms of yds. at a diss tance of 1000 yds.	of Field Glass	Weight of Hard leather Case oz.	of Soft leather Pouch oz.
5×	12	0.47	2.4	5.76	8.30	145	71/2	21/2	21/2



TUREX

Magnifying 6 times

Light Tourist Glass





1/3 Full Size

Small bulk and weight, combined with fine optical qualities

For Prices see Price Slip

Magni≠ fication	Dian	ctive neter f ctive	Dias meter of Exit Pupil	Light Trans: mitting Power	Field in angus lar meas sure	of View in terms of yds. at a diss tance of 1000 yds.	of Field Glass	Weight of Hard leather Case	of Soft leather Pouch
	mm.	in.	mm.				oz.	oz.	oz.
6×	21	0.83	3.5	12.25	8.50	150	10 ¹ /s	73/4	35/8



TELEX

Magnifying 6 times

Universal Glass for travelling and for use in the country



Small weight Good light transmitting power

In black stiff leather case with shoulder strap Codeword: Telex In brown stiff leather case with shoulder strap Codeword: Telexba In suède leather pouch Codeword: Telexwe

Magni≠ fication	Dian	ctive neter of ective	Dias meter of Exit Pupil	Light Trans= mitting Power	Field in angus lar meas sure	of View in terms of yds. at a disa tance of 1000 yds.	of Field Glass	Weight of Hard leather Case	of Soft leather Pouch
	mm.	in.	mm.				oz.	oz.	oz.
6×	24	0:94	. 4	16	8.50	150	15 ½/8	101/8	5 ¹ /8



SILVAMAR

Magnifying 6 times

Hunting and Marine Glass



Great light transmitting power. Extensive field of view Special glass for use in failing light

In black stiff leather case with shoulder strap Codeword: Silvamar In brown stiff leather case with shoulder strap Codeword: Silvamarba In suède leather pouch............................... Codeword: Silvamarwe

For Prices see Price Slip

Magni=	Effective Magnis Diameter		Dia= meter	Light Trans,	in	of View in terms of yds.	Weight of of of Field Hard Soft		
fication	Obje		of Exit Pupil	mitting Power	lar mea= sure	at a diss tance of 1000 yds.	Glass	leather Case	leather Pouch
	mm.	in.	mm.				oz.	oz.	oz.
6×	30	1.18	5	25	8.50	150	21	12 ⁵ /8	51/8



BINOCTAR

Magnifying 7 times

Marine and Night Glass



In black stiff leather case with shoulder strap Codeword: Binoctar In brown stiff leather case with shoulder strap Codeword: Binoctarba

	Effe	ctive	Dia=	Light	Field	of View in terms	Weight		
Magni≠ fication	Effective Diameter of Objective		meter of Exit Pupil	meter Trans= of mitting Exit Power		of yds. at a diss tance of 1000 yds.	of Field Glass	of Hard leather Case	
	mm.	in.	mm.				OZ,	oz.	
7×	50	1.97	7.1	50.4	7.30	128	385/8	225/8	





TURACT

Magnifying 8 times

Sporting and Travelling Glass



A small sized high power glass

In black stiff leather case with shoulder strap Codeword: Turact In brown stiff leather case with shoulder strap Codeword: Turactba In suède leather pouch Codeword: Turactwe

For Prices see Price Slip

T-00			D:	T:-L4	Field	of View	Weight			
Magnia fication	Dian C Obje	ctive neter of ective	Dias meter of Exit Pupil	Light Trans= mitting Power	in angus lar meas sure	in terms of yds. at a disa tance of 1000 yds.	of Field Glass	of Hard leather Case	of Soft leather Pouch	
	mm.	in.	mm.				Jz.	oz.	oz.	
8×	24	0.94	3	9	6.30	110	135/8	11 ⁵ /8	4 ⁵ /s	



DELTURIS

Magnifying 8times

Wide angle Binocular



1/3 Full Size

A compact glass with extremely large field of view

In black stiff leather case with shoulder strap Codeword: Delturis
In brown stiff leather case with shoulder strap Codeword: Delturisba
In soft leather pouch Codeword: Delturiswe



DELTRENTIS

Magnifying 8 times

Wide=angle Binocular



An excellent high power glass for race, travel and hunting Good light transmitting power. Extremely large field of view

In black stiff leather case with	shoulder
strap	Codeword: Deltrentis
In brown stiff leather case with	shoulder
strap	Codeword : Deltrentisba
In suède leather pouch	Codeword: Deltrentriswe

For Prices see Price Slip

Magni⊧ fication	Effec Dian o Obje mm.	neter f	Dias meter of Exit Pupil mm.	Light Trans= mitting Power	Field in angus lar meas sure	of View in terms of yds. at a diss tance of 1000 yds.	of Field Glass	Weight of Hard leather Case oz.	of Soft leather Pouch
8×	30	1.18	3.75	14.06	8.50	150	225/8	12 ⁵ /8	5 ¹ /8



DELACTIS

Magnifying 8 times

Wide angle Binocular



A powerful hunting and marine glass of exceptional light transmitting capacity and with an extremely large field of view

The most popular eyepiece focussing Race Glas

In black stiff leather case with shoulder strap Codeword: Delactis
In brown stiff leather case with shoulder strap Codeword: Delactisba

	Effe	ctive	Dia∍	Light	Field	of View in terms	We	Veight	
Magni# fication	Diar	meter of ective	meter of Exit Pupil	Transs mitting Power	in angus lar meas sure	of yds. at a dis= tance of 1000 yds.	of Field Glass	of Hard leather Case	
	mm.	in.	mm.				oz.	oz.	
8×	40	1.57	5	25	8.750	154	381/4	191/8	



DEKAR

Magnifying 10 times

Marine Glass



1/4 Full Size

High power binocular with great light transmitting capacity Requires a firm support

For Prices see Price Slip

Magni≠ fication	Dian	ctive meter of ective	Dia= meter of Exit Pupil	Light Trans= mitting Power	Field in angus lar meas	of View in terms of yds. at a diss tance of	We of Field Glass	of Hard leather Case
	mm.	in.	mm.		sure	1000 yds.	oz.	oz.
10×	50	1.97	5	25	50	87	415/8	20 ⁷ /s



TELONAR

Magnifying 12 times



High power glass for observing far distant objects
This glass requires a firm support

Magnis fication	Obje	neter	Dias meter of Exit Pupil	Light Transs mitting Power	Field in angus lar meas sure	of View in terms of yds. at a diss tance of 1000 yds.	We of Field Glass	of Hard leather Case
12×	40	1.57	3.3	10.9	4.20	73	35 ¹ /8	18 ⁵ /s



TELSEXOR

Magnifying 16 times



For great distances
Requires to be mounted on a steady support

In black stiff leather case with shoulder strap Codeword: Telsexor
In brown stiff leather case with shoulder strap Codeword: Telsexorba
Stand with case (see page 46) Codeword: Telsexorsta
Stockhead for stand (see page 46) Codeword: Telsexoraf
Weight of Stand and Stockhead in case abt 5 lbs

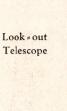
For Prices see Price Slip

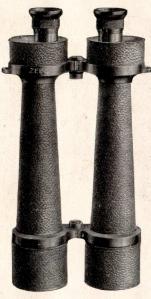
	Effe	ctive	Dia≉	Light	Field	of View in terms	Weight		
Magni≠ fication	Diar	neter of ective	meter of Exit Pupil	Trans= mitting Power	in angu= lar mea= sure	of yds. at a dis= tance of 1000 yds.	of Field Glass	of Hard leather Case	
	mm.	in.	mm.				oz,	02.	
16×	40	1.57	2.5	6.25	3.160	55	33 ³ /8	18 ⁵ /s	



DELFORT

Magnifying 18 times





1/5 Full Size

High power binocular

In black hard leather case with shoulder strap Codeword: Delfort

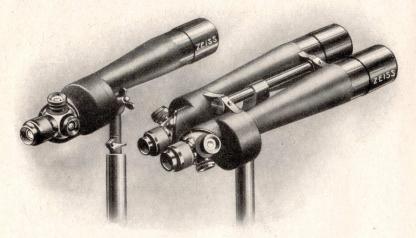
Weight of Stand and Stockhead in case abt. 5 lbs

The same binocular, fitted with two pairs of eyepieces, magnifying 10 and 18 times respectively, is named BIFORT

	Effec	rtive	Field of View				We	ight
Magni≠ fication	Dian o Obje	neter f ctive	meter of Exit Pupil	Trans= mitting Power	in angu≠ lar mea÷ sure	of yds. at a disa tance of 1000 yds.	of Field Glass	of Hard leather Case
	mm.	in.	mm.	STATE OF THE REAL PROPERTY.			02.	02.
18×	50	1.97	2.8	7.84	2.80	49	361/2	233/8



OBSERVATION TELESCOPES



STARMOR

STARMORBI

60 m.n. (23/8 in.) Telescopes for observation with one or both eyes. Magnifying: 12 times, 24 times and 42 times.

Zeiss Observation Telescopes are minutely described and illustrated in the following Catalogues:

ASTRO 61 contains light Travelling Models such as are mainly required for private use, for porch, verandah or window, as well as for touring. Diameter of objectives 60 mm. (23/8 in.) and 80 mm.

(3½ in.). Magnifications: 12 to 94 diameters.

ASTRO 53 contains, besides those described in Astro 61, teles scopes of greater dimensions, viz. monocular and binocular observation telescopes on fixed stands, for private use in country houses, club houses, for looks out stations, also coin operated telescopes for hotels, public places, seaside resorts etc. Diameter of objectives from 60 mm. (2 3/8 in.) to 240 mm. (9 1/2 in.).

Magnifications 12 to 200 diameters.

Some of these telescopes are specially fitted for use as astronomical instruments.

These catalogues and price lists may be had free on application.





TWIN FOCUSSING FIELD GLASSES

The twin focussing mechanism has the advantage of enabling the user of a field glass, when viewing rapidly approaching or receding objects, e. g. on race courses, to quickly reset the two eyepieces, the latter having been separately set for either eye in the first instance. By this means it is easy to maintain a permanently sharp and clear image. This advantage is, however, obtainable only at the cost of a twofold compromise, viz.

- 1. The weight of the glasses is slightly increased;
- 2. It is impossible to mount glasses so fitted in an absolutely dustproof and waterproof casing.

We therefore do not recommend field glasses fitted with twin focussing mechanism for use in the tropics.

To facilitate focussing or accurate resetting the twin foscussing device is provided with a scale and index.

The optical properties of these glasses are identical with those of the glasses fitted with independent focussing eyepieces, as described on the preceding pages.



TUROLEM

Magnifying 4 times

Theatre and Travelling Glass





1/3 Full Size

Great light transmitting power. Large field of view Small in bulk and light in weight

In black stiff leather case with shoulder strap Codeword: Turolem In brown stiff leather case with shoulder strap Codeword: Turolemba In suède leather pouch Codeword: Turolemwe

For Prices see Price Slip

Magni		ective	Dia=	Light		of View in terms		Weight	
Magni¤ fication	188	meter of ective	meter of Exit Pupil	Trans= mitting Power	in angu≠ lar mea≠ sure	of yds. at a dis= tance of 1000 yds.	of Field Glass	Weight of Hard leather Case oz.	of Soft leather Pouch
	mm.	in.	mm.				oz.	oz.	oz.
4 ×	20	0.79	5	25	10.30	182	101/8	73/8	3



TELETUR

Magnifying 6times

Small and light Tourists Glass*)





1/3 Full Size

Its extremely small dimensions and weight notwithstanding, this glass has a magnifying power of 6 diameters, which suffices for most purposes.

In black stiff leather case with shoulder strap Codeword: Teletur In brown stiff leather case with shoulder strap Codeword: Teleturba In suède leather pouch. Codeword: Teleturwe *) Respecting Telescopic Magnifiers see page 47

Magni≠ fication	C	neter	Dias meter of Exit Pupil mm.	Light Transs mitting Power	Field in angu= lar mea= sure	of View in terms of yds. at a diss tance of 1000 yds.	of Field Glass	Weight of Hard leather Case oz.	of Soft leather Pouch oz.
6×	15	0.59	2.5	6.25	7·1 º	123	7 ³ /8	51/8	25/8



TUREXEM

Magnifying 6 times

Tourists Glass





1/3 Full Size

Small bulk and weight, combined with fine optical qualities

For Prices see Price Slip

	Effective		Dia∍	Light	Field	of View in terms		Weight	
Magni≠ fication	Dian o	neter	meter of Exit Pupil	Transs mitting Power	in angus lar meas sure	of yds. at a disatance of 1000 yds.	of Field Glass	of Hard leather Case	of Soft leather Pouch
10 18 18 18	mm.	in.	mm.	Hage		1 1 1 1 1 1 1	oz.	oz.	oz.
6×	21	0.83	3.5	12.25	8.50	150	11 ⁵ /8	73/4	35/8



TELEXEM

Magnifying 6 times

Universal Glass for travelling and for use in the country



Small weight
Excellent light transmitting power

Magnia fication	Dia	ctive meter of ective in.	Dias meter of Exit Pupil mm.	Light Transs mitting Power	Field in angus lar meas sure	of View in terms of yds. at a dis- tance of 1000 yds.	of Field Glass	Weight of Hard leather Case oz.	of Soft leather Pouch oz.
6×	24	0.94	4	16	8.50	150	17 ¹ /8	10 ¹ /s	51/8



SILVAREM

Magnifying 6 times

Hunting and Marine Glass



Great light transmitting power. Extensive field of view Special glass for use at dusk

In black stiff leather case with shoulder	
strap	Codeword: Silvarem
In brown stiff leather case with shoulder	
strap	Codeword: Silvaremba
In suède leather pouch	Codeword: Silvaremwe

For Prices see Price Slip

Magni≠ fication	Diar	ctive meter of ective	Dias meter of Exit Pupil	Light Trans= mitting Power	Field in angus lar meas sure	of View in terms of yds. at a diss tance of 1000 yds.	of Field Glass	Weight of Hard leather Case	of Soft leather Pouch
	mm.	in.	mm.	Branch			oz.	oz.	oz.
6×	30	1.18	5	25	8.50	150	231/8	12 ⁵ /8	5 ¹ /8



TURACTEM

Magnifying 8 times

Sporting and Travelling Glass



A small sized high power glass

In black stiff leather case with shoulder
strap
In brown stiff leather case with shoulder
strap Codeword: Turactemba
In suède leather pouch Codeword: Turactemwe

Magnis fication	Effective Diameter of Objective		Dias Light meter Transs of mitting Exit Power		Field of View in terms of yds. at a diss tance meas of 1000 yds.		of of Soft Case Case		
	mm.	in.	mm.				oz.	oz.	oz.
8×	24	0.94	3	9	6.30	110	153/8	11 ⁵ /8	41/2



DELTURISEM

Magnifying 8 times

Wide angle Binocular



1/3 Full Size

A new glass for travel and sport with an extremely large field of view

In black stiff leather case with shoulder	
strap	Codeword: Delturisem
In brown stiff leather case with shoulder	
strap	Codeword: Delturisemba
In suède leather pouch	Codeword: Delturisemwe

For Prices see Price Slip

	Effective		Dia Light		Field of View in terms		Weight		
Magni≠ fication	(neter of ective	meter of Exit Pupil	Transs mitting Power	in angu= lar mea= sure	of yds. at a dis= tance of 1000 yds.	of Field Glass	of Hard leather Case	of Soft leather Pouch
	mm.	in.	mm.				oz.	oz.	oz.
8×	24	0.94	3	9	8.750	154	195/8	97/8	5 1/8



DELTRINTEM

Magnifying 8 times

Wide angle Binocular



An excellent high power glass for travel and all sports Good light transmitting power. Extremely large field of view The favorite twin focussing glass on the race course

In black stiff leather case with shoulder	
strap	Codeword: Deltrintem
In brown stiff leather case with shoulder	
strap	Codeword: Deltrintemba
In suède leather pouch	Codeword: Deltrintemwe

Magni∍ ficatio n	C	neter	Dias meter of Exit Pupil mm.	Light Transs mitting Power	Field in angu= lar mea= sure	of View in terms of yds. at a diss tance of 1000 yds.	of Field Glass	of Hard leather Case oz.	of Soft leather Pouch oz.
8×	30	1.18	3.75	14.06	8.50	150	241/2	125/8	5 1/8



MONOCULAR FIELD GLASSES

Magnifying 6 to 18 times



1/3 Full Size

The component telescope bodies of our binocular field glasses may be supplied separately. Their optical and mechanical qualities are identical with those of the binoculars. Obviously, they cannot furnish a stereoscopic effect. They may be desirable where one eye is sightless or seriously defective, or where the glass is intended for a purpose where sterescopic vision is of no moment. Being considerably lower in price than the corresponding double telescopes, they are likewise welcome in many cases for reasons of economy.

For codewords, weights and optical particulars see pages 8 and 9





ZEISS "TELEATER" GLASSES

"Teleater" is an opera glass in which the recognized advantages of the prism binocular, — viz. its excellent definition and more especially its large field of view, — are embodied in an exceedingly small and light instrument. It magnifies 3 times, which is the power best adapted for use in the theatre, and at this magnification the "Teleater" embraces at a distance of 100 yds a scene 24 yds wide. A person seated 60 feet away from the stage will therefore be able to take in at one glance all of the actors comprised within a width of $14^{1/2}$ feet.

The "Teleater" can be adjusted for any distance between the eyes and for any sight. Its mechanical design resembles that of our glasses with twin focusing arrangement.

For illustrations and description of these glasses see the following pages.

Respecting Lens Attachments for the "Teleater" see page 47



TELEATER

Magnifying 3times

Theatre Glass





1/3 Full Size

The Teleater is supplied in the following styles:

Style A: Elegant black covering and fittings, the same as the Zeiss Field Glasses

Style B: Gilt ends and lizard or fancy leather covering

Style C: Teleater de Luxe, as shown on next page: Gilt ends and mother of pearl covering

With each glass is supplied a black silk cord Styles B and C may also be had with detachable collapsible handle

For Codewords for different styles see next page

For Prices see Price Slip

Magni:			Dia Light meter Trans of mitting Exit Power		Field of View in terms in of yds.		Weight		
fication				angu= at a dis= lar tance mea= of sure 1000 yds.	Field Glass	Hard leather Case	Soft leather Pouch		
	mm.	in.	mm.				oz.	oz.	oz.
3×	13.5	0.53	4.5	20.25	13.70	24	73/8	$4^{1/2}$	23/4



TELEATER DE LUXE



Style C: Gilt ends and mother of pearl covering With detachable collapsible handle

Codewords for Teleater	Style A:	Style B:	Style C:
In beaded bagIn soft leather pouch In soft leather pouch In black leather case In fancy leather case With detachable collapsible handle in beaded bag Do., in soft leather pouch Do., in fancy leather case	Teledamus	Telesilla Teleboes — Teleba Telesillami Teleboesmi Telebami	Telepluson Telebeuton — Teleperlon Teleplus Telebeut Teleperl

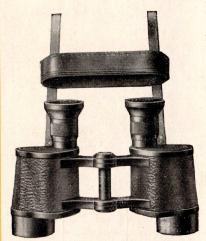
TELEATER ACCESSORIES



Beaded Bag	Soft leather Pouch	Leather case	
Soft leather Pouch Black morocco case Fancy or Crocodile leather The same, with room for d Beaded bag Detachable collapsible hand	case	Codeword: Telesia Codeword: Telebla Codeword: Telema Codeword: Telema Codeword: Telema Codeword: Teletea Codeword: Teletea	ack aco acit l



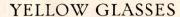
FIELD GLASS ACCESSORIES



RAIN GUARD

for protecting the eyepieces from rain while hunting, &c. The guard is attached to the shoulder strap and is so arranged that when the glasses are not in use it rests on both eyepieces, and pushes back when the glasses are held to the eyes.

> Codeword: Regenklapp For price see Price Slip





These glasses attach to the eyepieces and are useful in glaring light.

Codeword: Gelbglaser
Also specify field glass for which they are required.
For price see Price Slip

SIGHT CORRECTING GLASSES

For the use of persons with astigmatic eyes we recommend spectacle glasses fitting the eyepiece mounts in cases where it is desired to use the glasses without spectacles. When ordering, the oculist's prescription, giving the position of the axes, should be furnished.

Codeword: Telecorrect — Also specify field glass

For prices see Price Slip

The mounts of the Sight Correcting Glasses are marked R (for right) and L (for left) respectively. Also, on either mount there are two indentations (not on the cyslinder axis produced). When the glasses are in position the four indentations should be in a straight line.

For the convenience of spectable wearers the field glasses may be supplied with flat eyecups without extra cost.



COMPASS



A compass can be fitted to the lid of the case. It is so mounted that the casing also serves to arrest the needle, the latter being fixed when the casing is turned to the right and released when it is turned to the left. The projecting rim of the casing prevents dust and rain from enstering the compass and also protects it from damage.

Codeword: Kompass
For price see Price Slip

TREE SCREWS AND STANDS

Field Glasses of high magnifying power have a correspondingly greater weight. It is somewhat difficult to steadily support these glasses. For use with high power field glasses we have accordingly devised the following. — **Tree Screws** enable the user of a field glass to direct it both in horizontal and vertical directions. The tree screw designed for the binocular field glasses secures the instrument by its centre bar. For binoculars without centre bar a joining piece is supplied and in the case of monocular field glasses the screw attaches to the body of the instrument.

45



Tree Screw for binocular field glasses Codeword: Telarbor

Tree Screw for monocular field glasses Codeword: Simparbor

When ordering please specify the field glass for which the tree screw is required.





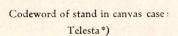
STANDS

These are of the well tried design of our tripod stands.

THE STOCKHEAD

grips the field glass after the manner of a tree screw and admits of its being freely directed both vertically and horizontally.

For Prices see Price Slip



Codeword of Headstock to fit: Teleauf*)

*) As far as special codewords for stands and headstocks are not stated under the different field glass models shown in this catalogue, please use the above codewords and also specify the field glass for which the stand and stockhead are required.



HOW TO FOCUS FIELD GLASSES FOR NEAR OBJECTS

Field glasses are primarily intended for viewing distant objects. Nevertheless, they can be focussed for viewing quite near objects by turning their eyecups, or the twin focussing mechanism, as the case may be, in the direction marked +, either as far as it will go or until the object can be seen distinctly.

There is, of course, a limit to the nearness of the objects. In order to be able to view objects at still closer ranges the field glasses may be used in conjunction with lens attachments. These are placed in front of the objectives of the field glass, which is theres by converted into a

TELESCOPIC MAGNIFIER.

With the aid of these interchangeable lens attachments the magnifying power of the binocular can be raised to $28^{1/2} \times$. The combinations so formed have the further advantage that they need not be brought so close up to the object as is necessary with ordinary magnifiers.



Telescopic Magnifier

Field glasses with contracted objectives, such as the TELEATER theatre glass and the TELETUR tourist glass, may be converted into binocular telescopic magnifiers affording stereoscopic vision, whilst field glasses with distended objectives may be used as monocular telescopic magnifiers.

The Zeiss telescopic magnifiers have moreover proved a valuable aid to persons who by reason of extreme weak-sightedness or otherwise impaired vision were to all intents and purposes nearly blind before the advent of these telescopic combinations. — A field glass in combination with a microscope objective in the place of the simple magnifier and mounted on a suitable stand forms a

TELESCOPIC MICROSCOPE.

According to the power of the objective used this will yield magnifications up to 180 diameters.

For further information respecting

Telescopic Magnifiers, Telescopic Microscopes, and accessories for their use for various scientific, industrial, and educational purposes, see our pamphlet Med 3.



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

SPECTACLE LENSES AND SPECTACLES / Punktal Spectacle Glasses, Katral Cataract Spectacle Glasses, Lens Attachments converting ordinary glasses into bis focals, Telescopic Spectacles for the extremely weaksighted

MAGNIFIERS / Monocular and Binocular Magnifiers, Spectacle Magnifiers, Telescopic Magnifiers, Folding Magnifiers, Reading Glasses, Picture Viewers

PHOTOGRAPHIC OBJECTIVES / Tessars, Double Protars, Double Amatars, Convertible Protars, Planars, Tele-Tessars, Telephoto Attachments, Distar Lenses, Yellow Screens, Dukar Filters, Reversing Prisms, Light Filter Troughs, Focussing Lenses, etc.

STEREOSCOPES / Verant Stereoscopes

MICROSCOPES and Microscope Accessories, Apparatus for ultrasmicroscopic observations and darkground illuminastion, Photosmicrographic Apparatus for visible and ultrasviolet light

PROJECTION APPARATUS / Episcopes, Epidiascopes

RIFLE SIGHTING TELESCOPES

ASTRONOMICAL TELESCOPES / Astronomical Accessories, Astronomical and Astrosphotographic Objectives, Observastory Domes

MEDICAL INSTRUMENTS / Ophthalmoscopic and Endoscopic Instruments, Illuminating Appliances for Operating Theatres

APPARATUS FOR ILLUMINATION and for Light Therapy SURVEYING INSTRUMENTS / Levels, Theodolites, 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.

MB

TELE DEPT.

August 25, 1923.

To our dealers:

The enclosed catalog of Carl Zeiss Prism Binoculars is the latest edition of this literature and will be designated as catalog T260.

In its pages will be found complete data covering the entire line, and includes description of such accessories as tripods, headstocks, rain guards, etc.

For the present it is not intended to be used for general distribution, but for your own use only. At the same time, should any of your prospective customers express a desire to own a copy, it will always be cheerfully furnished on request.

Very truly yours, HAROLD M. BENNETT



PRICE LIST

OF

CARL ZEISS

Prism Binoculars

In effect July 1, 1923





The latest and the la	
BUT DIEM	

bjectives			pouch	建筑
mm	Codeword	Price	Codeword	Price
Wit	h Individual F	ocusing E	vepieces	
20	Turol	\$ 48.00	Turolwe	\$ 47.00
12	Stenor	90.00	Stenorwe	90.00
				49.00 51.50
30	Silvamar	64.50	Silvamarwe	63.00
			Turactwe	55.00
24	Delturis	62.50	Delturiswe	61.50
				70.50
40	Telonar	92.00		
		92.00	*******	
90	Delfort	1 140.00		
Wit	h Central Focu	sing Adi	ustment	
20	Turolem	\$54.50	Turolemwe	\$ 53.50
		52.50	Teleturwe	51.50
	Telexem			55.50 58.00
30	Silvarem	71.00	Silvaremwe	69.50
	Turactem	62.50	Turactemwe	61.50
				68.00
04 1			C: 1	1 #04.00
				\$ 24.00 31.00
50	Binoctarmo	47.00		
			C:1	
			Delturispo	26.00 29.00
30	Deltrintmo	35.00	Deltrintpo	34.00
			Delactispo	43.50
			Telsexorpo	43.50 43.50
50	Delfortmo	66.50		10.00
	Opera C	lasses		
13,5	Telebolo	\$48.00	Teledamus	\$ 47.00
13,5	Teleba	54.00	Teleboes	50.00
13,5	leleperion	65.00	Telebeuton	61.00
	Binocular A	ccessorie	8	
deword	Price	C	odeword	Price
	\$3.50	Kompas	ss	\$3.25
	0.50	includin	ng mounting of	
				9.00
	10.00	Simparl		7.25
	1.25	Telesta		10.75
ser	2 20 11	Teleauf		10.75
	20 12 21 21 24 30 50 50 24 24 30 40 40 50 Wit 20 15 21 24 30 24 30 24 24 30 50 50 50 50 50 24 24 30 50 50 50 50 50 50 50 50 24 5 13,5 13,5 13,5 13,5	20	Turol \$48,00 90,00 21 Turex 50,000 24 Telex 52,50 30 Silvamar 64,50 50 Noctar 75,00 24 Turact 56,00 24 Turact 56,00 24 Turact 56,00 24 Delturis 62,50 30 Deltrentis 72,00 40 Delactis 92,00 40 Telonar 92,00 50 Delfort 140,00 With Central Focusing Adj	12

Tax 5 per cent additional