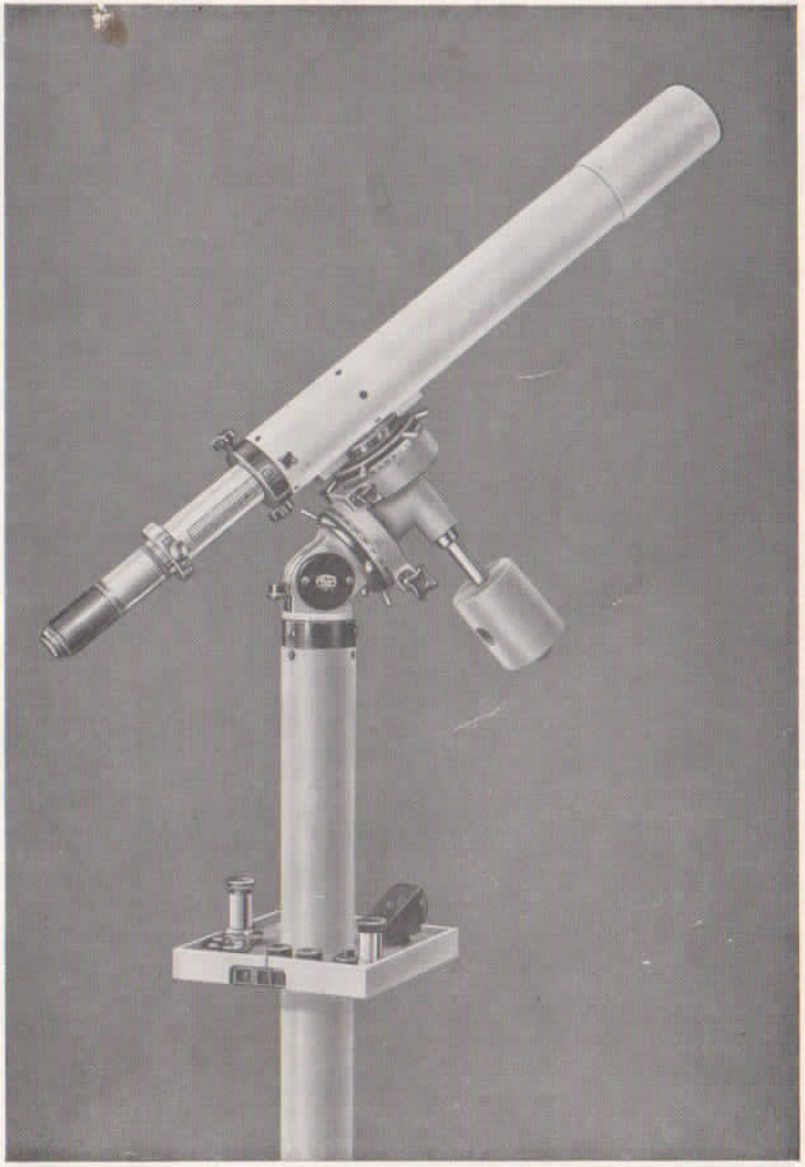


160008

School and Amateur Telescope 63/840, standard equipment

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CARL ZEISS JENA

ZEISS

School and Amateur TELESCOPE

CZ 16-100-2

odern educational methods appreciate, in growing measure, the advan-
ge of imparting knowledge of natural science not only by lecture but
fording the student, by personal observation, a further opportunity to
tablish closer contact with the problems under discussion.

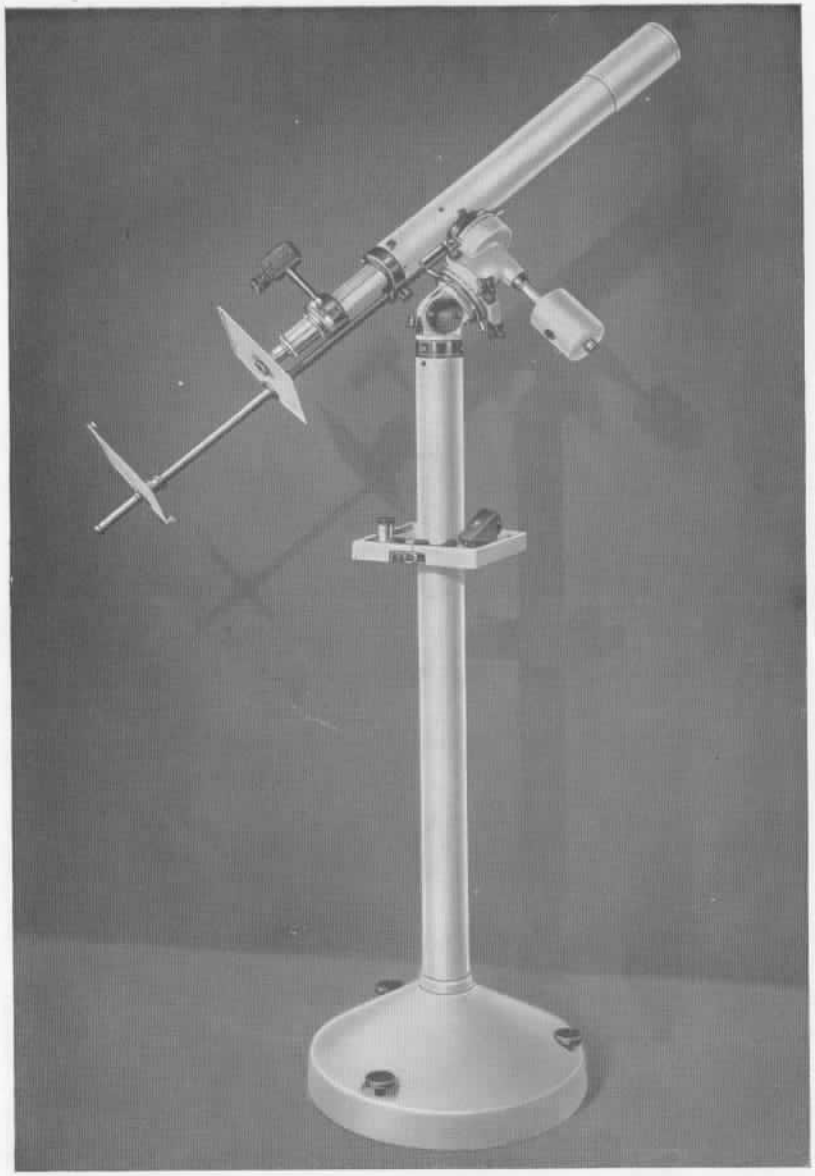
llowing the construction of the "Zeiss Planetarium" – a complex instru-
ent for demonstrating the stellar movements to an assembly of spectators
we have now produced, as a suitable complement, the

Astronomical Telescope for Schools and Amateurs

provide a means of familiarizing the student with the celestial wonders.
ie optical and mechanical parts of the new telescope are so dimensioned
at it adapts itself equally well for serious research investigations on the
art of amateur astronomers. Equatorially mounted the telescope is
quipped with a two-lens objective (type AS) of reduced chromatic aber-
tion with a focal lenght of 840 mm. (33") at a free aperture of 63 mm.
.5"). Location of the object to be observed is carried out with the
d of two graduated circles reading to 5' in R.A. and 1" in declination.
convenient friction clamp locks the telescope in any desired position.
ne adjustment and following, respectively, are effected through controls
aced on either side. The polar head of the equatorial mount is so
esigned that the telescope may be installed at any latitude; for use as
t-azimuth look-out telescope it is set to latitude 0° or 90°. Alternatively,
place of the equatorial a simple alt-azimuth mount may be supplied.
or balancing the telescope when using the various accessories and to
cilitate its detachment when in not use, the telescope tube is fitted to
e declination axis by means of a prismatic slide. Both telescope and
eclination axis are counterpoised with regard to the hour axis by a
iding weight with clamping screw.

ne telescope is supplied with a metal pillar stand. This may be supple-
ented, for portable use, by a sturdy wooden tripod.

ne equipment includes a wooden storage box to hold the telescope and
andard accessories. When not in use the objective is protected by a
ns cap provided with a circular diaphragm for solar observations; for
ie latter purpose a smoked glass must be attached to the eyepiece.



160009

School and Amateur Telescope 63/840 with sun projecting screen and monocular fieldglass finder

Zenith prism for convenient observation of objects at great altitude, for interposition into the path of rays between objective and eyepiece

Ring micrometer for determination of differences in R. A. and declination

Eyepiece spectroscope for observation of spectra of bright stars

Astro camera* with four-lens objective of 63 mm. free aperture and 270 mm. focal length (F/4.3) with 3 metals slides for 12 × 9 cm. plates, ground glass screen and clips for attachment to the telescope. In addition, cross line micrometer with filar illumination for the telescope. (For astro photography the telescope takes the place of a guide tube.)

* provided for in future manufacturing programme

Order List

Specification	Weight kgs.	Order No.	Code-word
Telescope 63/840 for Schools and Amateurs with equatorial mount, incl. 3 eyepieces and accessories, in box, with pillar stand	66	16 00 01	*Aaiev*
Supplementary parts			
Monocentric eyepiece f = 10 mm.	0.04	16 64 27	*Aaisi*
Orthoscopic eyepiece f = 6 mm.	0.04	16 65 11	*Aaiuk*
Triple ocular revolving nosepiece	0.4	16 45 05	*Aajap*
Prism erecting set	0.7	16 45 03	*Aajeu*
Sun projecting screen	0.6	16 45 20	*Aajka*
Herschel sun prism	0.6	16 45 14	*Aajti*
Monocular field glass 6 × 30	0.5	16 53 00	*Aaihy*
Revolving colour disc	0.08	16 52 25	*Aajuj*
Zenith prism	0.5	16 45 10	*Aakao*
Ring micrometer with steel ring on glass plate	0.02	16 30 15	*Aajyn*
Eyepiece spectroscope	0.05	16 33 00	*Aajzo*
Flexible shaft for R. A.-Slow motion	0.4	16 40 01	*Aalsf*
Alt-azimuth mount	1	16 22 01	*Aaine*
Wooden tripod	5	16 20 06	*Aaiof*

Besides the aforementioned two-lens objective the optical equipment of the standard model includes three eyepieces, the Huygens eyepiece f = 40 mm. screwing directly onto the tube extension, while either of the remaining two may be inserted into the eyepiece sliding sleeve. The latter is attached, by means of a novel changing device, to the ocular draw tube which is adjustable by rack and pinion for focusing the image.

Data

Objective		Eyepiece		Telescope		Exit Pupil
Aperture mm.	Focal Lenght mm.	Type	Focal Length mm.	Magnification	Angular field of view	
63	840	Huygens	40	21×	2.1°	3.0
		Huygens	16	53×	50′	1.2
		Orthoscopic	10	84×	32′	0.75
		Monocentric *	10	84×	27′	0.75
		Orthoscopic *	6	140×	19′	0.45

* supplied only to special order

The reflex-free monocentric eyepiece serves for observing finest details in planets, etc. The optical equipment may be supplemented by a sun glass for solar observations and a zenith prism for direct attachment to the eyepiece in place of the eyepiece screw cap. Deflecting the light rays by 90° the zenith prism presents a useful accessory for convenient observations of stars at great altitudes.

To extend the versatility of the telescope the following further accessories are available:

Triple ocular revolving nosepiece for convenient and rapid changing of magnifications

Prism set for erecting the image for terrestrial observations

Sun projecting screen for projection of the image of the sun

HERSCHEL sun prism for direct solar observation (without smoked glass)

Monocular field glass 6×30 with cross lines for use as finder

Revolving colour glass disc with various colour and neutral glasses for observations of the moon and planets