Telescopics

Catalogue

Amateur and Professional Telescope Accessories And Supplies

6565 Romaine Street

Los Angeles, California 90038

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469-6321

Amateur and Professional Telescope Accessories and Supplies

AUGUST 1, 1970

All articles listed are of the highest quality and will be found to fully meet the representations made herein. Every effort is made to keep prices down, without compromising quality. So-called "bargain" and "surplus" goods are not handled.

TERMS: CASH. MINIMUM ORDER TO BE MAILED $1.00 PLUS POSTAGE, AND, IN CALIFORNIA, SALES TAX SHOULD BE ADDED. C.O.D. shipments are not made. Where not shown with the price postage is additional, and shipping weights are given to enable the purchaser to ascertain from the local post office the cost of postage to be added to the remittance — any excess will be returned. All shipments are made without insurance unless the customer specifically requests that his order be insured, the cost of which is, of course, added to the postage charged.

ALL Export orders must be accompanied by U.S. dollars.

ALL SHIPMENTS OUTSIDE U.S.A. ARE SUBJECT TO SHIPPING CHARGES.

Material scarcity sometimes causes delay in shipment and we must ask our friends to be patient in such cases as the problem is beyond our control.

ALL PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

MIRROR MAKING KITS

All blanks are Pyrex with hard ceramic tools. All abrasives are true to grain size and are uncontaminated. Long experience has proven these steps in grain size to be well chosen. Ample abrasives are supplied in these kits to make an f/8 mirror. For shorter f ratios additional #1 (80 grain) carborundum may be required.

Each kit consists of a pyrex blank of the size ordered, a ceramic tool and all six abrasives as indicated below. It also includes rouge, pitch, beeswax and Barnesite. No instructions are included with the kits as a book is really needed. We recommend "Making Your Own Telescope" by Allyn J. Thompson. While this book gives instructions for making a six inch reflecting telescope the same instructions apply equally well to any size.

Size of Mirror	4¼"	6"	8"	10"	12½"
Price of Kit	$10.75	$13.90	$18.50	$36.00	$58.00
Shipping Weight	6 lbs.	9 lbs.	15 lbs.	35 lbs.	55 lbs.

ABOVE PRICES PLUS PARCEL POST AND INSURANCE

MIRROR MAKING SUPPLIES

Size of Mirror	4¼"	6"	8"	10"	12½"
Pyrex Blanks	$ 3.50	$ 6.50	$10.50	$21.00	$39.50
Ceramic Tools	2.70	3.10	4.00	9.25	11.00
Shipping Weight, Blanks	2 lbs.	3 lbs.	8 lbs.	14 lbs.	27 lbs.
Shipping Weight, Tools	2 lbs.	3 lbs.	6 lbs.	9 lbs.	13 lbs.

ABOVE PRICES PLUS PARCEL POST AND INSURANCE

ABRASIVES, ET CETERA

#1 grit, 80 grain, carborundum, approximate quantity, 6 oz.	$ .60
#2 grit, 150 grain, carborundum, approximate quantity, 4 oz.	.60
#3 grit, 220 grain, carborundum, approximate quantity, 4 oz.	.60
#4 grit, FFF grain, carborundum, approximate quantity, 3 oz.	.60
#5 grit, M303, American Optical emery, approximate quantity, 2 oz.	.60
#6 grit, M303½, American Optical emery, approx. quantity, 2 oz.	.60
Rouge, red optical, unwashed, AOC, approx. quantity, 4 oz.	.60
Pitch, black, coal tar, untempered, approx. quantity, 1 lb.	.60
Beeswax, yellow, 2 oz.	.60
Barnesite #924, 2 oz.	1.00

ABOVE PRICES PLUS PARCEL POST AND INSURANCE

Grits and polishing materials are packed under clean conditions in sealed containers. **Barnesite** polishes at least twice as fast as rouge. Many hours can be saved by bringing the mirror along to the figuring stage with **Barnesite** and then switching to fine washed rouge — simply rinse the tool and mirror off and proceed with rouge. The slower cutting action of rouge is helpful to the beginner during the figuring stage. Using **Barnesite** and rouge we have polished and figured a 6" mirror by hand in 2½ hours — this requires thorough fine grinding. REMEMBER it is hopeless to attempt removal of pits by polishing — many have tried and have been disappointed.

BOOKS ON TELESCOPE MAKING

"Making Your Own Telescope" is very popular with makers of telescopes. The author has drawn on his extensive teaching of the art in arranging the text to lead the worker along by logical steps through the making of an f/8 6" telescope. However, while this book applies particularly to a 6 inch f/8 mirror the same instructions hold for a mirror of any diameter and any focal length. Designs for mountings, spiders, focusing devices, etc., are also included.

Making Your Own Telescope, by Allyn J. Thompson	Postpaid	$ 4.25
Telescopes For Skygazing, by Henry E. Paul	Postpaid	5.25
Nortons Star Atlas & Reference Handbook	Postpaid	6.75

SECONDARY MIRROR ELLIPTICAL FLATS

All Pyrex

Our flats are of excellent quality with a surface accuracy exceeding ⅛ wave and without defects with respect to edge or surface polish. Ground accurately elliptical to yield a circular section when viewed head on and minimize the obstruction. Anti-chip bevel only 1/32" wide to preserve maximum area for working face. Flats are extremely sensitive to pressure in any direction, if properly mounted and collimated our flats will faithfully preserve the performance of the main mirror. Contrary to the opinion of some it is almost hopeless to search for a piece of commercial plate of suitable quality for use as a flat. The cutting will spoil flatness and the method of polishing creates an "orange peel" surface. The role the secondary plays in telescope efficiency cannot be exaggerated.

	Bare	Aluminized and Quartz Overcoated
1.050 Minor Axis diameter	$ 6.00	$ 8.00
1.306 Minor Axis diameter	7.00	9.00
1.550 Minor Axis diameter	9.50	11.50
1.830 Minor Axis diameter	13.50	16.00
2.142 Minor Axis diameter	16.00	19.00
2.610 Minor Axis diameter	20.50	23.50
3.000 Minor Axis diameter	38.00	41.00

ALL ARE POSTPAID

FINISHED PARABOLOID MIRRORS

Our finished mirrors are professionally made. They are machine ground and polished but are all hand figured to a true parabolic curve. They are all corrected to better than 1/10 wave of sodium light and are guaranteed to resolve to the theoretical limit of aperture, which means they are practically perfect, although there is no such thing as a perfect optical surface. These mirrors are smooth, free from zones, and free from a turned edge. They come to you aluminized and quartz overcoated. 100% Guaranteed.

Prices listed below are for f ratios of f/5 to f/15.

Prices on other f ratios upon request.

4¼ inch	with diagonal 1.050	Minor axis	$ 47.50
6 inch	with diagonal 1.306	Minor axis	72.50
8 inch	with diagonal 1.550	Minor axis	105.00
10 inch	with diagonal 2.142	Minor axis	185.00
12½ inch	with diagonal 2.610	Minor axis	305.00

Should you order a finished mirror without the diagonal indicated deduct from the above prices the cost of the aluminized diagonal as indicated herein.

ABOVE PRICES PLUS PARCEL POST AND INSURANCE

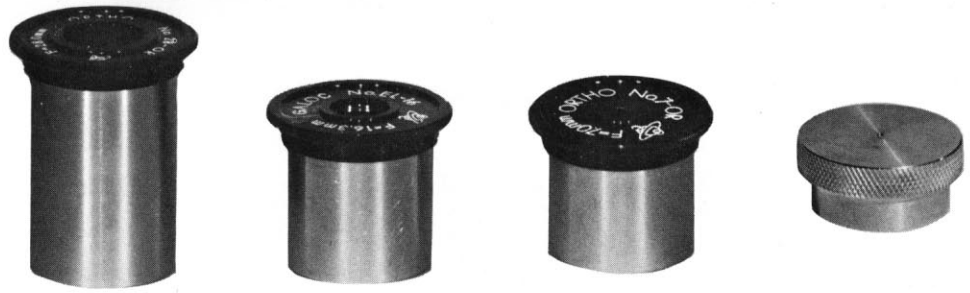
REFIGURING OF MIRRORS

A refigured mirror will perform just as good as our new finished paraboloid mirrors. They are all figured to better than 1/10 wave of sodium light, free from zones and a perfect edge. However, if your mirror arrives with a few scratches which are deep ones, (the shallow scratches usually polish out) these same scratches, which do no harm optically, will still be there after the refiguring unless you wish them taken out. This means going back to grinding and a complete re-polishing. For this there is an extra charge of 20% for the 4¼, 6 and 8 inch sizes, and 30% for the 10 and 12½ inch sizes.

REFIGURING, ALUMINIZING, QUARTZ COATING, NO GRINDING

4¼ inch	Mirror	with diagonal	$ 30.00
6 inch	Mirror	with diagonal	40.00
8 inch	Mirror	with diagonal	60.00
10 inch	Mirror	with diagonal	85.00
12½ inch	Mirror	with diagonal	140.00

ABOVE PRICES PLUS PARCEL POST AND INSURANCE



OCULARS

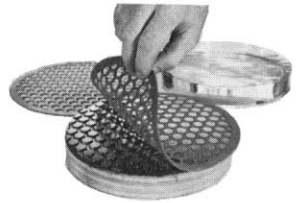
These oculars are imported from Japan. Without qualification they are the finest we have ever used. This statement has been substantiated by practically all those who have purchased them. The outside diameter of all is 1.250 inches, the American standard. All glass-air surfaces are hard coated to improve light transmission. They all have a very wide field of approximately 50°. Three of those listed below are true Orthoscopic having a triple achromatic field lens and a single eye lens. The fourth is an Ocular of new design named the "Galoc". It is a modified Erfle with a definite improvement over the Erfle. It has a focal length of 16.3 mm (approximately 2/3 of an inch) and has an amazing angular field of 75°. Even with this wide field the flatness of this field is most excellent. It is fully achromatic and shows no color. It is especially recommended for use with a good Barlow. All oculars are guaranteed to equal or surpass the performance of all other makes regardless of type or price, or money will be refunded. COLLIMATING EYEPIECE, ALUMINUM WITH DULL BLACK ANODIZED FINISH.

PRICES

Focal Length	Type	Price	Focal Length	Type	Price
28.0 mm (1.10″)	Orthoscopic	$21.00	10.5 mm (0.41″)	Orthoscopic	$21.00
16.3 mm (0.64″)	Galoc	21.00	7.0 mm (0.28″)	Orthoscopic	21.00

Collimating eyepiece $2.00

ALL POSTPAID



HEX-LAP MATS

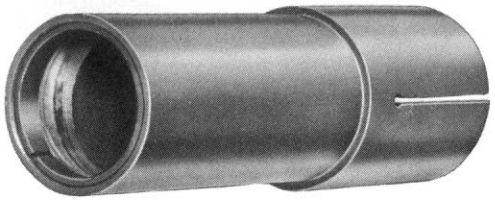
These are custom made to each mirror size and are blanked on huge presses from .070 red rubber of best quality. Hex-Lap mats are good for hundreds of perfect pitch laps, both for polishing and figuring. The exclusive HEXAGON design gives maximum results with minimum fluid loss and effort.

The smaller sizes are also perfect as sub-diameter polishers. Hundreds of A.T.M's claim Hex-Lap without an equal.

PRICES

4.25 inch size	$ 2.00	8.00 inch size	$ 3.00
6.00 inch size	2.50	10.00 inch size	3.50
12.50 inch size	$ 4.00		

ALL ARE POSTPAID



BARLOW

The negative lens used in this Barlow has been very carefully ray-traced to insure its excellent quality. It is achromatic and coated. It is mounted in a brass tube, carefully turned to the proper size of the American standard 1.250 inches.

The Mounting is 4¼ inches long, 2⅝ inches of which is 1.250 outside diameter to fit into the focusing device. The eyepiece end is 1½ inches deep and has an inside diameter of 1.250 inches. This eyepiece end is slotted to accommodate a slight variation in ocular diameters.

All metal parts are chrome plated. The achromatic negative lens has a focal length to parallel light of 3½ inches and gives a maximum magnification of up to slightly more than three times of that of the ocular alone, with which it is being used. This amount of magnification is attained when the eyepiece is pulled almost all the way out of the mounting. When the eyepiece is pushed in closer to the negative lens the magnification is decreased, depending upon the amount of separation between the Barlow lens and the eyepiece.

Price $21.00 Postpaid

This Barlow can be used with any of our eyepieces.

We particularly recommend its use with our "Galoc" 16.3mm eyepieces, with which it performs superbly.

RONCHI FILM TEST STRIP

A strip of negative ½" wide by 4" long, 100 lines per inch, photographed from an engine ruled glass plate. Lines are described by Porter and Kirkham, ATM, Book 1, page 264. While not quantitative the Ronchi test is very valuable in plainly disclosing zones, turned edge, oblateness, sphere, etc., almost at a glance. The long strip permits clipping one end to the knife edge with the other covering a large pin hole, the knife edge should be set slightly inside focus and well out of the return beam, so that no more than three or four bands cross the mirror. If the bands are of perfectly even width entirely across the mirror and off both edges the mirror is spherical without edge defects. If wider in the center it is deeper than a sphere but if narrower it is oblate. If the bands turn in as they pass off the edge the latter is turned down. The test is very helpful in interpreting the Foucault shadows.

Ronchi Test Strip as above: Price: $1.00 Postpaid

ALUMINIZATION AND QUARTZ OVERCOATING

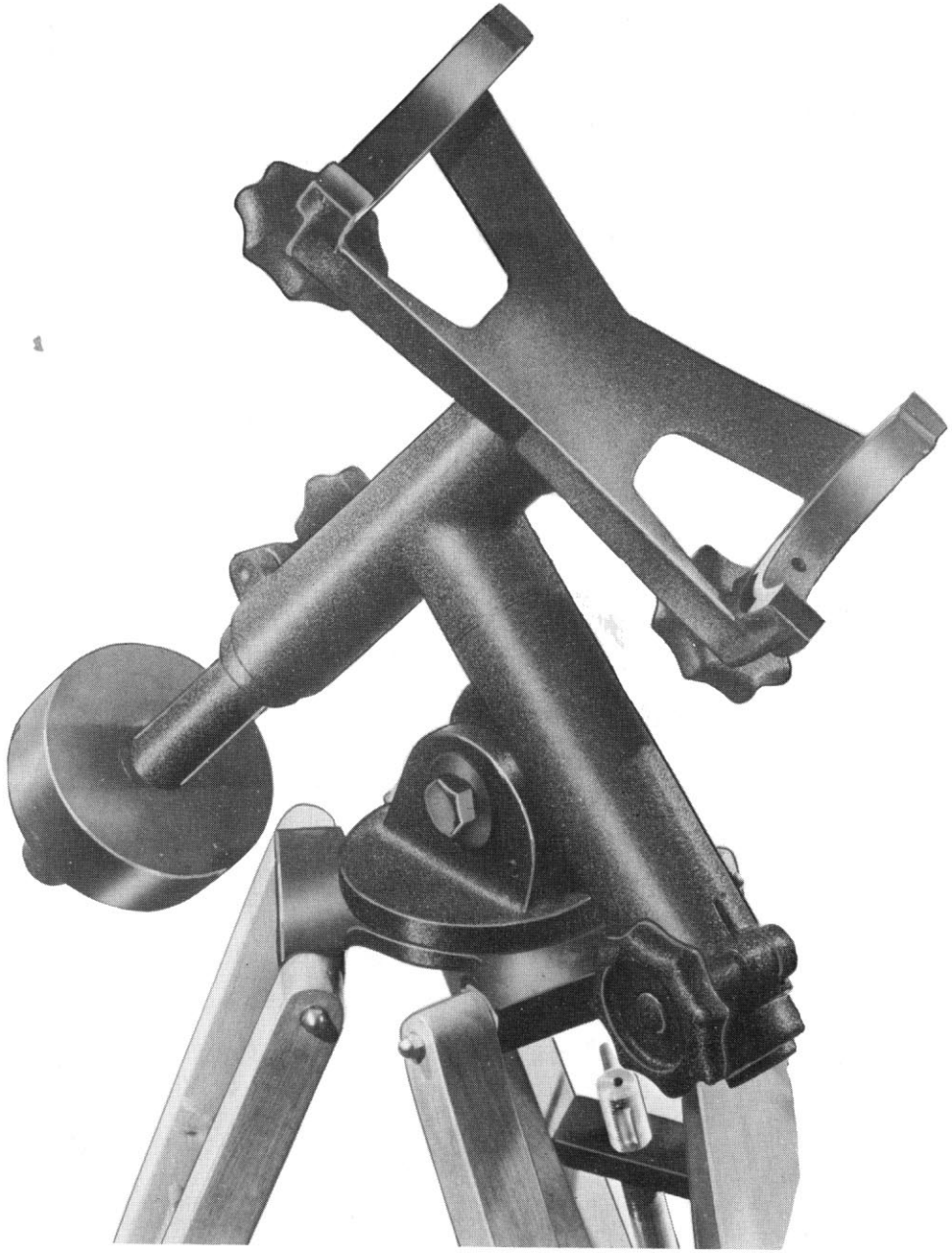
Our aluminizing and new process of quartz overcoating is quite exceptional, both in hardness and reflectivity. With a well polished mirror reflectivity is 91% or better at 5500 angstroms or the yellow-green region to which the eye is most sensitive. These coatings may be cleaned without harm by washing, using room temperature water and mild detergents. A better method of cleaning is to use our special cleaner which leaves no spots or streaks. It sells for 75 cents per bottle plus postage, and is enough for a great many cleanings. These coatings with reasonable care will last for many years.

Size	4¼"	6"	8"	10"	12½"
Price	$6.00	$7.50	$ 10.00	$ 12.50	$ 20.00

All other sizes will be quoted upon request.

Above prices plus return postage and insurance.

When the Secondary flat accompanies the mirror it will be coated without extra charge.



FINISHED EQUATORIAL MOUNTING
LESS TRIPOD, $75.00

FINISHED EQUATORIAL MOUNTING

Good optics alone do not make a good telescope. A sturdy, rigid mounting is a "must" for good seeing, as vibration can destroy the seeing of much fine detail. The mounting must also be smooth in its operation so that the stars, planets, et cetera, can be followed easily without binding or jerking. To accomplish the above, the design must be right, all parts must be sufficiently strong to carry the weight and not sag. Above all, the machining of the parts and bearings must be accurately done with all axes at exactly ninety degrees to each other. Also, the polar axis must be adjustable so that the mounting may be used in any latitude.

We believe our new equatorial mounting answers all the above "musts" in an excellent fashion. The major parts are aluminum castings, made of virgin alloy #356, T6 heat-treated. The shafts are solid steel, precision ground to 1½ inches in diameter. The lock collars and bolts are also of steel. The polar and declination axis housings are 2½ inches in diameter and 9 inches long, with 4 inches of bearing on each axis. The bearings are steel and aluminum with the latter impregnated with graphite and light oil. This is a very satisfactory bearing combination for slow speed revolution. Cast base is 6 inches in diameter. The base is not drilled and tapped as it may be mounted on a tripod or pier and many different fastening designs may be required.

It is completely machined and is unpainted. The mounting weighs approximately 33 pounds and the counterweight 13 pounds. It will rigidly support a 6- or 8-inch mirror of any focal length, and a 10-inch mirror of short focal length. Furnished with saddles for 7-, 8-, 9½-, 10-, and 12-inch OD diameter tubes. Specify size of tube when ordering.

The mounting, complete as pictured less tripod, is priced at $75.00 f.o.b. Los Angeles, packing charges are $7.00 extra and it can only be shipped via Railway Express, Truck or Rail Freight.

A clock drive and setting circles can be supplied with this mounting. However, machine work is required and they are best installed at the factory before shipping. The clock drive costs $90.00 additional. Setting circles cost $60.00 additional.

Steel tube stand with three cast aluminum legs, casters and flat cap, that are all removable, at $40.00 – plus shipping charges.



SPIDER

The importance of a solid, vibrationless holder for a reflecting telescope secondary diagonal mirror cannot be over-exaggerated. Our Spiders are designed for absolute rigidity.

They are of the four vane variety, and present no corners to increase the diffraction pattern. They are adjustable as to tube diameter and will fit all tubes with an O.D. of 6 to 16 inches. *(Adjustable by Folding Vanes.)*

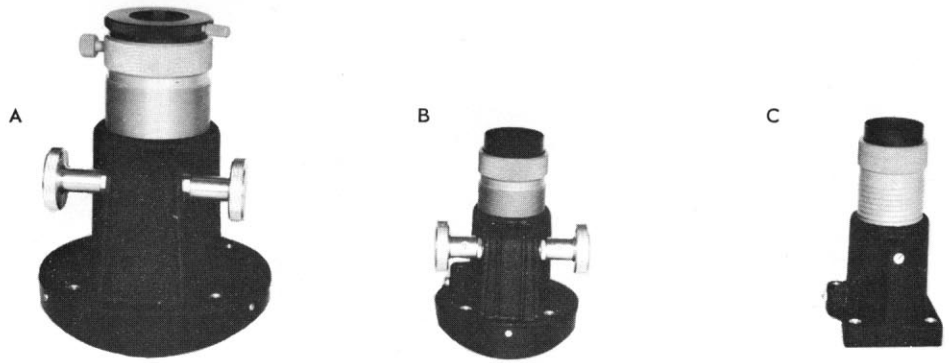
Collimation over an angle of three degrees is easily affected by the use of four Allen set screws pressing against the diagonal holder shaft, which is also adjustable up or down.

The Spider is made of brass with the exception of the shaft and plug, which is a machined aluminum casting. It is finished in dull black oxide.

FOR ELLIPTICAL DIAGONALS WITH MINOR AXIS OF:

1.050"	$15.00
1.306"	16.00
1.550"	17.00
1.830"	18.50
2.142"	19.50
2.610"	21.00

ALL ARE POSTPAID



SKY-MICRO FOCUSING MOUNTS

Licensed Under U.S. Patent 3,051,045

We believe these focusing mountings to be the finest made. They are all metal, precision engineered and precision made. The types "A" and "B" are a combination of the smoothest operating generated rack and pinion of zero eccentricity, plus a helical micro-vernier slow motion focusing at any point in stepless "tenths" (1/10,000th inch) for the most exacting seeing your telescope can command. They come equipped with a replaceable contour ring to fit different tube diameters including flat. They are beautifully finished in optical grey and instrument black baked enamel.

SKY-MICRO GIANT (A) is a larger mounting and while it will fit all telescopes is intended primarily for the larger sizes where photography is to be used The main opening is two inches in diameter to accommodate a camera lens and is equipped with a bushing, locked in, to take the American standard oculars of 1.250 inches in diameter. It is not equipped with a draw tube.

SKY-MICRO REGULAR (B) is smaller and is sized to fit the American standard 1.250 inch eyepieces. It comes equipped with draw tube to extend the range. The type "A" and "B" are both of the same type and the same high quality.

SPACEKING (C) is not rack and pinion but is helical only. It should not be confused with cheap focusing devices. It again is all metal, precision made and finished. It can be pulled in and out for rough focusing and then turned for fine adjustment. It automatically fits all size tubes, even flat. It comes with the same draw tube as type "B"

PRICES

SKY-MICRO GIANT – – *Tube Sizes Flat, 12", 15", 19"*	$41.95
SKY-MICRO REGULAR – *Tube Sizes Flat, 5", 7", 9", 12", 15"*	25.00
SPACEKING	15.00

ALL ARE POSTPAID

SPECIFY TUBE DIAMETER WHEN ORDERING



MIRROR CELLS

Our mirror cells are of cast aluminum; they are completely machined and unpainted. Each cell is complete with an adaptor casting to fasten the cell to the tube. The mirror is held in the cell by three adjustable right angle brackets and the cell is fastened to the adaptor casting by three spring-loaded collimating screws and knobs.

Spacers (not furnished) can be used to fit the adaptor casting to slightly larger I.D. tubes.

PRICES

6 inch Mirror Cell with Adaptor to fit 7 inch tube	$11.00
8 inch Mirror Cell with Adaptor to fit 9½ inch tube	13.50
10 inch Mirror Cell with Adaptor to fit 12 inch tube	20.00
12½ inch Mirror Cell with Adaptor to fit 15 inch tube	37.50

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TUBING

We do not handle telescopic tubing. Of all types of tubing we unhesitatingly recommend fiberglass as far superior to all metal tubes.