

OPTICAL EQUIPMENT AND SUPPLIES SINCE 1939

OPTICA b/c Company, 4100 MacArthur Blvd., Oakland, California, 94619, U.S.A.

50¢.

# ATM

## AMATEUR TELESCOPE MAKER'S EQUIPMENT AND SUPPLIES CATALOGUE No. ATM-78

OPTICA b/c



# ORDER INFORMATION

## PLEASE READ CAREFULLY BEFORE ORDERING

**CONFIDENCE** You can purchase OPTICA b/c equipment and supplies with confidence. You are dealing with a U.S. company that has an established reputation of quality, precision and service since 1939. Our products are used by educational institutions, governments, the military, observatories, planetariums and research institutions as well as amateurs the world over. Absolutely no rejects, seconds or toy quality products are merchandized by the OPTICA b/c Company or its subsidiaries. OPTICA b/c adheres strictly to the ethical standards for advertising as set forth by the Better Business Bureau (B.B.B.) and the Federal Trade Commission.

**GUARANTEE** All OPTICA b/c products are guaranteed against defective materials and/or workmanship as stated in our catalogs and on guarantee cards. No other warranty or liability is given or implied. Please read instructions which accompany our products.

**SAFE DELIVERY** Assured by careful packaging, and all major items are insured.

**SERVICE** Replacement parts, down to tiny screws, are available, no matter which of the OPTICA b/c factories throughout the world produced the instrument. A Sales-Service Division stands ready to supply information and technical expertise relative to all products. We invite you to make use of these services.

**FAST** Most orders are shipped the same day as received. For special orders, custom work, heavy equipment and out-of-stock items, you are advised of the expected shipping date. Avoid delays; print your name and address clearly, including zip code number. Order by item, description, stock number and price. When ordering publications, include title, author and price as well as stock number. Also, please specify the catalog from which you are ordering.

**PRICES** are subject to change without notice. Check the latest OPTICA b/c News Letter to see if any changes from catalog prices have been listed. The latest edition of the News Letter will be sent to you free of charge. Simply request same, and include a self-addressed, legal #10 size, stamped envelope. Minor price increases on prepaid orders will normally be shipped C.O.D. for the increase to avoid delay, with the option for merchandise to be returned for full refund.

**MINIMUM ORDER** Prepaid orders received totaling less than $10.00 will be subject to a service charge of $1.00. Please note that products may be ordered from any of the catalogs to make the $10.00 total.

**CHARGE BY PHONE, MAIL OR IN PERSON** For the convenience of our customers, OPTICA b/c honors both Master Charge and Bank Americard. Include both card number and expiration date. Charge orders received for less than $25.00 will be subject to a $3.00 service charge. Shipping and insurance charges will be added to all M/C and B/A orders. F.O.B. Oakland, Calif.

**OPEN ACCOUNT** Governments and educational institutions may order on open account. Terms: Net E.O.M. Due to the high cost of accounting, orders received for less than $25.00 are subject to a $3.00 open account service charge. Shipping and insurance charges will be added to all open account orders. F.O.B. Oakland, Calif. Orders must be submitted on your official purchase order form. No telephone open account orders can be accepted.

**TAXES** California residents add current sales tax.

**SHIPPING AND CRATING** Shipping charges for prepaid book orders in the U.S.A. are paid by OPTICA b/c. All other prepaid orders which can be shipped for less than $1.50 are sent with shipping charges paid by OPTICA b/c. Prepaid orders costing more than $1.50 to ship are sent C.O.D. for shipping costs. Customer pays shipping costs on all charge account orders regardless of amount.

**ORDERS FROM FOREIGN COUNTRIES —** All orders are subject to a $5.00 service charge to cover special handling required for export and extra surface shipping costs. If you require air mail, please state on your order. Should shipping costs exceed $2.50 you will be advised of the additional cost. When ordering films and plates see "ORDERING INFORMATION — Astrophoto Catalog Price List" and add the amount listed for shipping to the $5.00 service charge. Payment must be made by an International Postal Money Order or a check (draft) drawn in U.S. dollars on any bank in the U.S.A.



**LOSS OR DAMAGE IN TRANSIT CLAIMS** Damage claims must be made by you directly to carrier. Save packing and original container for their inspection. Claims for shortages in shipment must be made to OPTICA b/c within five days of receipt. If any item has been backordered, a notice will be enclosed in the package.

**LATEST MODELS** We reserve the right to supply our latest models, which may include new developments not illustrated in our catalog. Consult the latest edition of the OPTICA b/c News Letter in which we make every effort to keep you informed of any product changes. One will be sent to you free if you enclose a legal #10 size, self-addressed, stamped envelope with your request.

**IMPORTANT NOTICE TO EDUCATORS** OPTICA b/c equipment and materials have been approved over the years for purchase with National Defense Education Funds, and other aid grants. Qualification is dependent upon use. We recommend that you consult your state department of education for information and approval.

**REQUESTS FOR ADDITIONAL INFORMATION** Address correspondence to our Sales-Service Division.

**TELEPHONE** (415) 530-1234. Switchboard is open 10 a.m. to 5:30 p.m., including Saturday, Pacific time. Collect calls cannot be accepted.

**NEW CATALOGS, EVENTS CALENDAR AND NEWS LETTER** OPTICA b/c catalogs are updated and revised periodically. They contain a wealth of useful information and are liberally illustrated with diagrams and photographs. There is a minimal charge for handling and postage which may be paid in cash, check or U.S. postage stamps. When you order catalogs you will receive **FREE** the latest copy of the OPTICA b/c News Letter and a current Astronomical Events Calendar.

**Amateur Telescope Maker's Catalog** Now you can satisfy all your telescope making needs from one source, over 400 items. Includes: standard parts, difficult-to-find items, and the many exclusive products available only from OPTICA b/c — from "A" (Abrasives) to "Z" (Zone Testing Masks). The "All Together" concept also includes complete units, components, supplies, and services ..... **50¢**

**Astrophotography Catalog** Camera-telescope couplers, films and plates, regular and specialized emulsions (such as spectroscopic), camera brackets, paper, chemicals, processing equipment, etc., over 550 items. ..... **50¢**

**Publications and AVA Catalog** Our largest selection of astronomically related materials. Over 300 different publications, atlases, maps, charts, planispheres, slides, posters, recorded lectures on records, standard tapes and tape cassettes, celestial, lunar and Mars globes, orreries, teaching aids, . . . and there's more ..... **50¢**

**Telescopes & Accessories Catalog** Terrestrial, celestial, refractors and reflectors, drives, diagonals, spectroscopes, erectors, solar observation system, eyepieces, variable density polarizing system, adapters, cleaning supplies, filters, etc., over 250 items. ..... **50¢**
















**When you see this trade-mark, you know it is the finest that Photo-Optical Instrumentation Engineering can produce.**

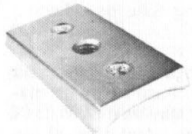


## Absorbent, Moisture

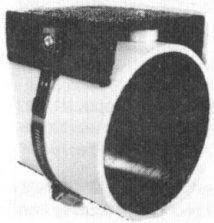
Valuable instruments can be ruined by excessive moisture. Putting this chemical absorbent into your instrument box will eliminate the problem. Necessary in humid climates. Can be restored to original freshness by heating for several hours at 250° F. Supplied in packets, ready to use. 1/4 pound

**1 Packet (Absorbent + Bag = 3 oz.)..... Stock No. MA-003**
**5 Packets (15 oz. Total)..... Stock No. MA-015**
Meets requirements of Military Specifications MIL-D-3464-D.

## Adapter, Telescope to Camera Tripod



Metal plate, satin finish, 1" x 1-3/4" x 1/4" (25.4mm x 44mm x 6mm). Drilled for 2 mounting bolts and threaded in the center to accept a standard photographic tripod screw. Attach to almost anything you want to mount on a tripod. Suitable for 60mm (2.4") telescopes up to 700mm (27.5") focal length. Fits tubes 2" to 3" (50mm to 76mm) in diameter; can be shimmed for smaller diameter tubes ..... **Stock No. ATCT-1**

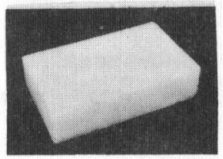


## Bands, Adjustable Steel

A quick and easy method of securing parts or accessories to your telescope without drilling holes. Clamp on a guide telescope, a camera, a temporary counterweight. Attach an accessory box to the mount pedestal or tripod. Dozens of uses. Particularly recommended as an inexpensive method of securing a telescope tube to the mount saddle. When bands are loosened, tube may be rotated. Strong, stainless steel, protects against corrosion. Supplied in any length over 7" (178mm).

**7" length (178mm)** ..... **Stock No. BAS-07**

Additional lengths are available in 1" (25.4mm) increments.



## Beeswax

For those who wish additional beeswax in their pitch and/or a wax coating over the facets of the lap, OPTICA b/c offers the finest, refined, optical grade beeswax available.

| Quantity | Stock No. |
|---|---|
| 2 oz | BW-002 |
| 1 lb. | BW-016 |

Note: For the perfect lap everytime, use an OPTICA b/c lap mold. See "Mold, Pitch Lap."

## Brackets, Star Finders



Black wrinkle finish, lightweight. Accurate collimation is accomplished by three-point adjusting screws with locking nuts. Nuts and bolts for mounting included. Supplied with proper base curve to fit all OPTICA b/c reflector or refractor tube diameters. **State outside tube diameter when ordering.** Odd tube sizes—add $7.50 per pair for machining.

| Accepts Starfinder Tube Diameters MIN. | MAX. | Stock No. |
|---|---|---|
| 1/2" (13mm) | 2-5/8" (67mm) | BF-002 |
| 1-3/8" (35mm) | 3-1/2" (89mm) | BF-003 |
| 3-1/8" (79mm) | 5-1/8" (130mm) | BF-005 |
| 7-3/8" (187mm) | 9-3/8" (238mm) | BF-009 |
| 9-3/8" (238mm) | 11-3/8" (289mm) | BF-011 |

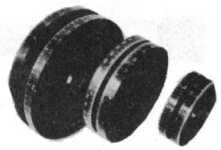




## Circles, Setting

Necessary for serious observation. Locate objects too faint for your finder. Sold only in pairs of the same size — 1 R.A. and 1 Dec. circle. Precision divisions, white on black.

| Outside Diameter | Thickness | Standard Bore Diameter | Stock No. |
|---|---|---|---|
| 4" (101mm) | 3/4" (19mm) | 1/2" (13mm) | CSR-04 |
| 6" (152mm) | 3/4" (19mm) | 1" (25.4mm) | CSR-06 |
| 8" (203mm) | 3/4" (19mm) | 1-1/2" (38mm) | CSR-08 |
| 10" (254mm) | | 2-1/2" (64mm) | CSR-10 |



**OTHER THAN STANDARD BORE DIAMETERS**

4" Circle - from 1/2" to 1-1/2". You specify..... **Add $5.00**
6" Circle - from 7/8" to 2". You specify..... **Add $5.00**
8" Circle - from 1" to 2". You specify..... **Add $7.00**
10" Circle - Send your specifications for quotation.

## Coating

### MIRRORS, ALUMINIZING

**Superior Reflectivity**

Our laboratory utilizes the latest scientific methods of ultrahigh vacuum aluminizing. Rigorous control of optimum thickness (0.00000394 inch), no variation in coating density, and freedom from pinholes insure maximum reflectivity. Years of dependable service for amateurs, professionals, and educational institutions have proved the quality of our work.

**Guaranteed to Last Longer**

Our aluminizing withstands the Scotch-tape test and will not come off when washed with optical detergent. A hard, durable overcoating protects the layer of aluminum. The end result is longer life with maximum resistance to weather corrosion and deterioration — a real money saver. Diagonal is aluminized **Free** when sent with main mirror.

**Brighter Images**

In keeping with the highest quality, **we are supplying enhanced coatings for all mirrors at no extra cost.** This special technique permits 94% reflectance for telescope mirrors.

**Size Limitations**

24" diameter maximum; 60 pounds maximum.



## Compounds

There is great variation in the quality of compounds supplied for mirror grinding. OPTICA b/c compounds are the finest available, with consistent uniformity closely guarded. You profit by producing a beautifully finished mirror while saving up to 50% in time and effort.

### GRINDING COMPOUNDS

Made of fast-cutting grit with a hardness rating between sapphire and diamond. Long lasting cutting action. These are considered by most workers to be 4 or 5 times more efficient than emery.

### FINISHING COMPOUNDS

Optically graded to the purest standards. These abrasives have rounder edges for more consistent smoothing action that will leave your mrror in perfect condition for a rapid polish.

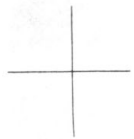
### POLISHING COMPOUNDS

Contamination-free. Stringently graded. **Red Rouge** is slow cutting and sleek-free — the choice for the most delicate figuring operations. **Cerium Oxide** is 2 to 3 times faster than rouge, cleaner and non-staining — an excellent, all around polishing compound that will leave your mirror perfectly smooth and ready for aluminizing.



Note particle uniformity

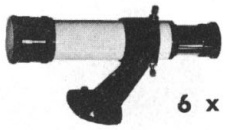
## Crosshairs, Installation



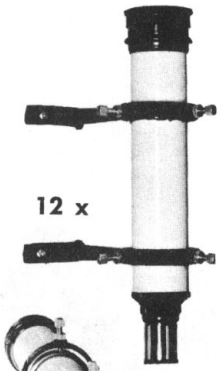
We install wire crosshairs in most eyepieces with external focal planes (most Kellners and Orthoscopics). 12mm (1/2") focal length or longer ..... **Stock No. CI-001**



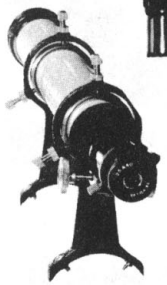
5X



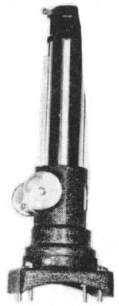
6 x



12 x



25 x



# Finder Telescopes

Precision built finders with high relief eyepieces and crosshairs to accurately pinpoint your object. Objectives are hard coated, Fraunhofer type. All mounting brackets have lockable, three-point adjustments for easy collimation, plus nuts and bolts, ready for mounting.

## PROFESSIONAL MODELS

For those who will not settle for less than the finest quality and durable service available, our professional line will satisfy their requirements.

| Power | Objective Diameter | Focal Length | Field of View | With Bracket | Stock No. |
|---|---|---|---|---|---|
| 5X | 25mm | 140mm | 5° | Yes | TFS-05 |
| 6X | 30mm | 160mm | 4° | Yes | TFS-06 |
| 12X | 40mm | 240mm | 2° | Yes | TFS-12 |
| 25X | 50mm | 500mm | 1° | Yes | TFS-25 |

## STANDARD MODELS

Our large volume makes it possible to offer a complete line of popular, excellent quality finders at money saving prices. All these scopes are priced with or without mounting brackets.

| Power | Objective Diameter | Focal Length | Field of View | With Bracket | Stock No. |
|---|---|---|---|---|---|
| 4X | 11mm | 58mm | 6.9° | Yes | FTP-4B |
| " | " | " | " | No | FTP-04 |
| 5X | 24mm | 100mm | 7.5° | Yes | FTP-5B |
| " | " | " | " | No | FTP-05 |
| 8X | 50mm | 120mm | 4.6° | Yes | FTP-8B |
| " | " | " | " | No | FTP-08 |
| 12X | 40mm | 200mm | 2.4° | Yes | FTP-12B |
| " | " | " | " | No | FTP-12 |
| 25X | 50mm | 500mm | 1.3° | Yes | FTP-25B |
| " | " | " | " | No | FTP-25 |

The 25 power finder (both Standard and Professional models) utilizes rack & pinion focusing, and interchangeability of eyepieces (for high power use as a guide telescope). Its standard 24.5mm (0.965") eyepiece holder can be unscrewed to allow a 1-1/4" (31.7mm) eyepiece holder to be used. (See "Holders, Eyepiece" in the Telescope and Accessories Catalog.) This finder can be used with a camera for astrophotography, and it will accept accessories such as a star diagonal, a Solar Observation System and a terrestrial zoom eyepiece.

# Focusers

## FOCUSERS, PROFESSIONAL RACK & PINION

All have microsmooth (helical type) gears, adjusting screws for tension control, a knurled setscrew to lock the eyepiece, and 360° rotatable base for adjusting to any position. Black wrinkle finish, chrome focusing tube, and satin black, standard length eyepiece holder. Both RP-062 and RP-082 have exceptionally long focusing travel. With most units, focusing travel is too short, and you will not be able to use a full complement of eyepieces, a sun or star diagonal, astrocamera, etc. This problem is not encountered with these two OPTICA b/c rack and pinions. Specify for refractor, reflector, catadioptric or cassegrainian-type telescope.

| Eyepiece Holder Size | Height Above tube Minimum | Height Above tube Maximum | Focusing Travel | Stock No. |
|---|---|---|---|---|
| 1-1/4" (31.7mm) | 4-11/16" (119mm) | 7-13/16" (198mm) | 3-1/8" (79mm) | FPRP-6 |
| 1-1/4" (31.7mm) | 5-1/2" (140mm) | 10-1/8" (257mm) | 4-3/8" (111mm) | FPRP-8 |

With these focusers the eyepiece holder screws into the chrome tube making it possible to purchase some additional holders for other size eyepieces and accessories. See "Holders, Eyepiece."

Another interesting and highly functional item is the camera bracket that clamps directly onto the OPTICA b/c rack and pinion, eliminating the need for drilling holes in your tube. See the Astrophotography Catalog under "Brackets, Camera."

For adapters and holders to convert from one size eyepiece to another, see the Telescopes and Accessories Catalog.





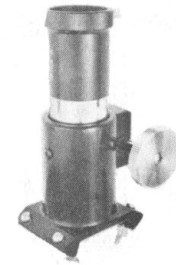
## FOCUSER, STANDARD RACK & PINION

Standard model; fits any tube diameter. Spring loaded tension control, helical-cut rack. Minimum height above tube — 3". Accepts 1-1/4" (31.7mm) eyepieces. Includes removable extension to increase focusing travel to 4"..... **Stock No. FSRP-E**

**Without extension,** travel is 2-3/16" (56mm)..... **Stock No. FSRP-O**

## 2" FOCUSER, STANDARD RACK & PINION

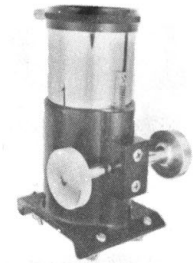
Threaded eyepiece holders, accepts both 2" and 1-1/4" eyepieces. 3" (76mm) travel, helical-cut rack. Minimum height above tube with 2" adapter — 4-1/8"; with 1-1/4" adapter — 4-5/8". Setscrew lock for eyepieces. Fits any size tube..... **Stock No. FSRP-2**



# Holders

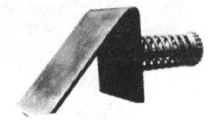
## HOLDERS, DIAGONAL MIRROR ASSEMBLIES

These assemblies are designed for maximum versatility, rigidity and utility. They are incredibly easy to install and adjust. Assemblies are offered in two parts: the **Diagonal Mirror Holder** and the **Vane Assembly.**



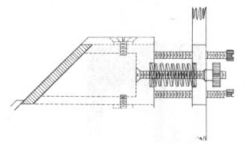
### DIAGONAL MIRROR HOLDER, ECONOMY

Mount any size rectangular or elliptical secondary mirror. Cement directly to the 45° plate. Includes 45° plate, screw, spring and thumb nut for adjustment. Fits any size OPTICA b/c vane assembly for complete adjustment control. Price does not include vane assembly. ....**Stock No. DMHE-1**



### DIAGONAL MIRROR HOLDER, PROFESSIONAL

Mirror supporting parts are constructed of fiberglass, with all its advantages over metal—another OPTICA b/c exclusive. No glue to warp the mirror! No clips to damage the surface! All holders accept diagonals of any thickness. Supplied complete with: inner and outer fiberglass cores, adjusting screw, nut and spring. **NOTE:** Price does not include diagonal mirror.



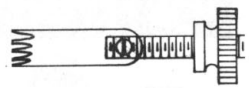
| Diagonal mirror holders to accept Professional elliptical diagonals of the following diameters | Stock No. |
|---|---|
| 32mm | DMH-32 |
| 40mm | DMH-40 |
| 53mm | DMH-53 |
| 60mm | DMH-60 |

### VANE ASSEMBLY

Four vanes, rigid, easily and fully adjustable; supports the mirror diagonal holder unit. Supplied complete with adjusting screws and vane-adjusting units. Once adjusted, solidly locks.



| Vanes to fit the following tube diameters Min. I.D. | Max. O.D. | Stock Number |
|---|---|---|
| 4 13/16" | 6" | VA-004 |
| 7¼" | 8½" | VA-006 |
| 9 3/16" | 10⅜" | VA-008 |
| 11⅞" | 13" | VA-010 |
| 14 7/16" | 15⅞" | VA-012 |



If vanes shorter than those listed are required, just cut the vanes to the proper length and redrill the end holes.

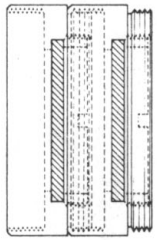
## HOLDERS, EYEPIECE LENS

Anodized aluminum core to hold eyepiece lenses. Make your own eyepieces, special designs, etc. Threaded to fit eyepiece tubes.



| Eyepiece Size | Accepts Lens Diameters up to | Stock No. |
|---|---|---|
| 24.5mm (0.965") | 12mm (0.472") | HEL-02 |
| 1-1/4" (31.7mm) | 16mm (0.630") | HEL-01 |

Also see "Tubes, Eyepiece" and "Focusers, Rack & Pinion."

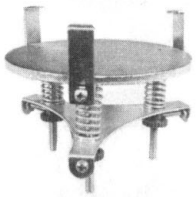


## HOLDERS, PIGGYBACK FILTER

Assemble your own special filters, mount Ronchi screens, removable eyepiece reticles . . . a thousand uses. These are the regular OPTICA b/c Piggyback filter holders; they screw into eyepiece tubes, astrophoto adapters, spectroscopes, etc. Machined metal, with retaining ring. Accept 21.5 mm diameter disks.

| | Stock No. |
|---|---|
| To fit 24.mm eyepiece tubes | HPF-02 |
| To fit 1¼" eyepiece tubes | HPF-01 |

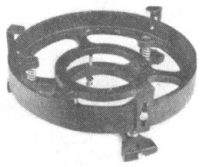
Also see "Filters for Observation and Astrophotography."



## HOLDERS, ECONOMY PRIMARY MIRROR

Standard aluminum, as cast, unpainted. Complete with mirror holding cleats, screws, nuts, springs, assembled.

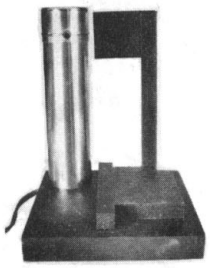
| Mirror Diameter | Stock No. |
|---|---|
| 3" (76mm) | HPME-3 |
| 4-1/4" (108mm) | HPME-4 |



## HOLDERS, POPULAR PRIMARY MIRROR

Heavy duty, very sturdy mounts, cast aluminum, flat black finish, ready for use.

| Mirror Diameter | Stock No. |
|---|---|
| 6" (152mm) | HPMP-06 |
| 8" (203mm) | HPMP-08 |
| 10" (254mm) | HPMP-10 |
| 12-1/2" (317mm) | HPMP-12 |



## Kit, Focault Testing

Build your own simplified Focault tester for checking the curve of your telescope mirror. Kit includes all metal, wood and electrical parts plus instructions ..... Stock No. KFT-01

## Kits, Mirror Making

To make your own telescope mirror is a simple and extremely rewarding project. Success is primarily governed by the practicability of the kit and materials. OPTICA b/c has selected the "just right" combination to insure your success. All you add is the time — no machinery is necessary. In the OPTICA b/c kit, you receive: one Corning, fine annealed, Pyrex blank, one thick plate glass tool, pitch and 8 compounds (5 grinding, 2 finishing, and final polishing). With the OPTICA b/c kits, it is like climing steps one-at-a-time; in this way higher quality results are possible with minimum effort and one-half the time. For complete information on the superiority of the individual elements of these kits, refer to the items where they are listed separately in this catalog.

**For Cassegranian and Gregorian telescopes** all you need in addition to the regular kit is the appropriate secondary and tool — See: "Mirrors, Blanks.".



| Mirror Making Kits | Stock No. |
|---|---|
| 3" | KMM-03 |
| 4-14" | KMM-04 |
| 6" | KMM-06 |
| 8" | KMM-08 |
| 10" | KMM-10 |
| 12-1/2" | KMM-12 |
| 16" | KMM-16 |

Also see "Molds, Pitch Lap," "Stone, Edging," "Coating," "Solution, Focal Length Test," "Templates, Mirror Grinding," and "Zone Testing Mask."





## Kit, Mirror Testing

Includes appropriate Zone Testing Mask, Grinding Templates with ten curves, Focal Length Test Solution, 100 line per inch Ronchi Screen and instructions for all.

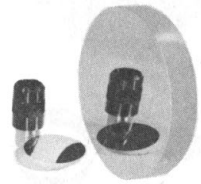
| Mirror Size | Stock No. |
|---|---|
| 4¼" | KMT-04 |
| 6" | KMT-06 |
| 8" | KMT-08 |
| 10" | KMT-10 |
| 12½" | KMT-12 |

## Kits, Richest Field Optics

Explore gorgeous milky way vistas. You will be amazed at the incredible views of nebulae, galaxies and star clusters through a high speed richest field telescope. Enjoy the delicate wisps and faint colors of nebulae invisible in other scopes.

## RICHEST FIELD REFLECTOR OPTICS

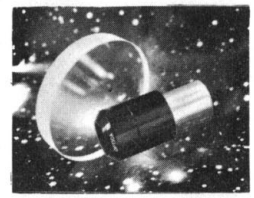
For serious rich-field observing where aperatures larger than those available with refractors are desired. Just look at these top quality, f/4 optical systems. All optics are the finest and guaranteed to give superb performance — 1/8 wave, aluminized and overcoated mirrors and fully corrected, 5-element, wide angle Erfle eyepieces. Each kit includes a primary mirror, diagonal and Erfle eyepiece (1-1/4"). These f/4 primary mirrors are not available separately.



| Kit # | Mirror Diameter | Focal Length | Diagonal Size | Eyepiece f.l. | Power | Stock No. |
|---|---|---|---|---|---|---|
| 1 | 6" | 24" | 54mm | 20mm | 30X | KRFL-1 |
| 2 | 6" | 24" | 54mm | 25mm | 24X | KRFL-2 |
| 3 | 6" | 24" | 54mm | 32mm | 19X | KRFL-3 |
| 4 | 8" | 32" | 66mm | 20mm | 41X | KRFL-4 |
| 5 | 8" | 32" | 66mm | 25mm | 33X | KRFL-5 |
| 6 | 8" | 32" | 66mm | 32mm | 25X | KRFL-6 |

## RICHEST FIELD REFRACTOR OPTICS

Build a thrilling sharp, bright, wide angle, richest field refractor telescope. High quality, coated optics. Each kit contains a cemented, achromatic objective and a 5 element, erfle eyepiece. Lower powers can be handheld. Add your own crosshairs and make a super-finder.

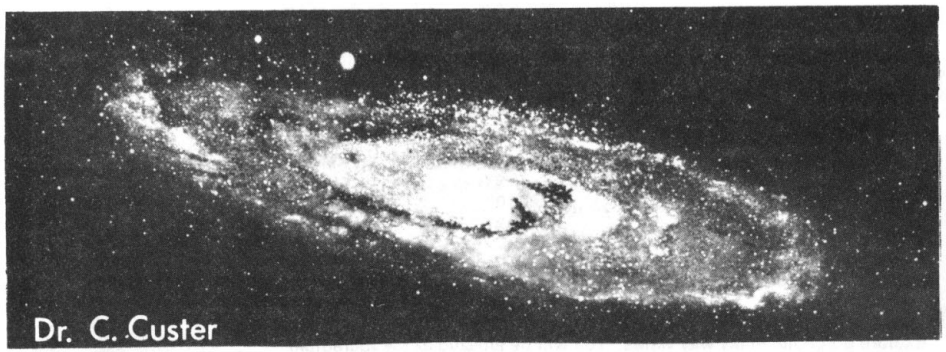


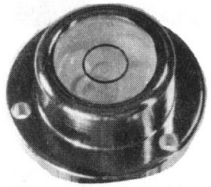
| Kit# | Obj. Diam. | Obj. f.l. | Eyepiece f.l. | Power | Stock Stock No. |
|---|---|---|---|---|---|
| 1 | 60mm | 250mm | 20mm | 12.5X | KRFR-1 |
| 2 | 60mm | 250mm | 25mm | 10X | KRFR-2 |
| 3 | 60mm | 250mm | 32mm | 7.8X | KRFR-3 |
| 4 | 80mm | 300mm | 20mm | 15X | KRFR-4 |
| 5 | 80mm | 300mm | 25mm | 12X | KRFR-5 |
| 6 | 80mm | 300mm | 32mm | 9.4X | KRFR-6 |
| 7 | 101mm | 600mm | 20mm | 30X | KRFR-7 |
| 8 | 101mm | 600mm | 25mm | 24X | KRFR-8 |
| 9 | 101mm | 600mm | 32mm | 18.8X | KRFR-9 |

## Lenses, Objectives



No finer Fraunhofer type, refractor objective lenses are available than offered by OPTICA b/c. All air-to-glass elements are antireflection hard-coated, resulting in increased clarity and durability. Only superior quality center-of-pot optical glass is utilized, and each lens is available in its own machined, aluminum cell. Lenses ordered in the cell are collimated before shipment, and each one is ready for immediate installation and use. See price list for sizes available.



## Level, Bubble

Circular bubble level for accurate mount leveling. Reads all directions at once. 1" diameter base, 7/16" high. 3 mounting holes, chrome plated.

**Stock No. LB-001**



## Magnifier 10x

Good quality, 2 element, 10 power hand magnifier in swivel metal housing with vinyl case. Perfect for examining a mirror's surface for pits during polishing. Handy for a multitude of applications. ..... **Stock No. Mg-010**

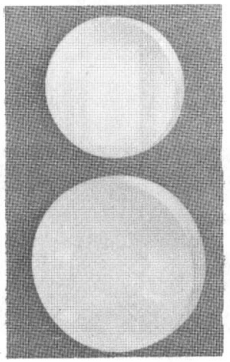
## Mirrors

### MIRROR BLANKS, Primary and Secondary

All mirror blanks supplied by OPTICA b/c are of the highest quality, Corning PYREX brand. The average coefficient of expansion is only 0.0000033 cm/cm per degree C. from 0° to 300°C.; thus there is no perceptible distortion due to temperature change. In addition, consider these first-quality advantages: bubble free, fine annealed, strain birefringence — 10mmu or less. Only the finest blanks carry the OPTICA b/c certification. Look for it; it is your assurance you are receiving the very finest.

**Cassegrainian and Gregorian Secondaries:** Note that the small diameter blanks are relatively thick fulfilling all requirements for secondaries for these telescopes.

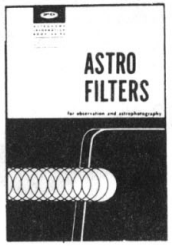
Also see "Templates, Mirror Grinding," and "Zone Testing Mask."



### MIRROR TOOLS, Primary and Secondary

Primary mirror tools are made from bubble-free glass, flat on both sides, polished, and beveled.

**Cassegrainian and Gregorian Secondary Tools** (up to 3" diameter) are extra thick, of Pyrex stock, and perfectly matched for the secondary mirror blanks.




### ASTROFILTERS FOR OBSERVATION & ASTROPHOTOGRAPHY

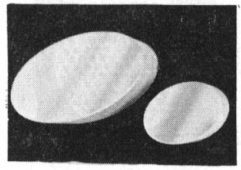
The most comprehensive coverage of the subject available. The Why and How, Celestial objects listed, recommended filters for each. Easy to understand. Illustrated: Diagrams, Charts and Photographs.

**HIGHLY RECOMMENDED !** ..... **Stock No. PA-002**





## MIRRORS, FINISHED DIAGONALS, ELLIPTICAL



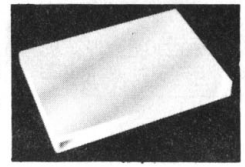
**POPULAR QUALITY**

Very good mirrors, aluminized and overcoated, ± 1/10 wave sodium light. See price list for sizes.

**PROFESSIONAL QUALITY**

Deluxe in every respect, beautifully finished, aluminized with protective quartz overcoat, ± 1/25 wave sodium light or better, beveled to prevent chipping . . . for those who demand the utmost in optical performance. Our professional fiberglass holders fit most of these diagonals. See price list for sizes.

## MIRRORS, FINISHED DIAGONALS, RECTANGULAR



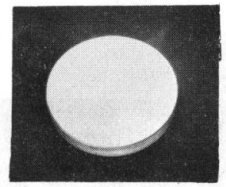
Economical rectangular mirrors for Newtonian secondaries. Average quality, 1/4 wave. Aluminized and overcoated. See price list for sizes.

**GUIDE TO DIAGONAL SELECTION**

The following table is a guide to selecting the proper elliptical diagonal for your reflector telescope. Minor axis diameters are listed in millimeters. Calculations are based on the diameter of the full moon and standard OPTICA b/c equipment. If you are utilizing a rack-and-pinion of less than recommended travel and/or a tube of substandard diameter, the rule of thumb is to deduct 10mm from the diameters listed below. To be sure of adequate coverage, however, you may wish to compute your own diagonal size.

| f/ratio | Secondary Mirror Diameter | | | | |
|---|---|---|---|---|---|
| | 4¼" | 6" | 8" | 10" | 12½" |
| f/5.6 | 40mm | 53mm | 70mm | 80mm | 80mm |
| f/8 | 32mm | 40mm | 53mm | 60mm | 70mm |
| f/11 | 32mm | 40mm | 53mm | 60mm | 60mm |

## MIRRORS, FINISHED PRIMARY, PROFESSIONAL

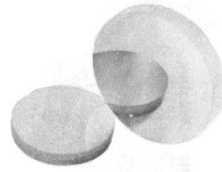


OPTICA b/c offers you the finest, instrument quality, telescope mirrors available. From center to circumference—magnificent in their perfection. Produced from first quality, fine annealed (10mmu), Corning glass pyrex blanks. These parabolized mirrors are finished and corrected by hand, and they are tested again and again until they reach their unsurpassed quality. Guaranteed to ± 1/25 wave or better (Sodium light). Aluminized and Quartz overcoated.

| Diameter | f/5.6 Stock No. | f/7 Stock No. |
|---|---|---|
| 4-1/4" (108mm) | MPP-405 | MPP-407 |
| 6" (152mm) | MPP-605 | MPP-607 |
| 8" (203mm) | MPP-805 | MPP-807 |
| 10" (254mm) | MPP-105 | MPP-107 |
| 12-1/2" (317mm) | MPP-125 | MPP-127 |

Custom Mirrors: For larger mirrors, special sizes, focal lengths, coating, etc., quotations on request.

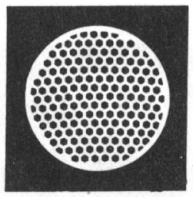
## MIRRORS, FINISHED PRIMARY, STANDARD

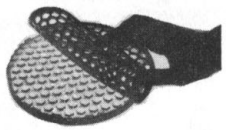


Made from fine-annealed pyrex blanks, aluminized and silicon monoxide overcoated. ± 1/10 wave. Very good performance.

| Diameter | Focal Length | Focal Ratio | Stock No. |
|---|---|---|---|
| 6" | 48" | f/8 | MP-608 |
| 8" | 56" | f/7 | MP-807 |
| 12-1/2" | 100" | f/8 | MP-128 |

## Mold, Pitch Lap





**LOOK: Years of experimenting have produced a pitch lap mold that will not stick to pitch!** OPTICA b/c molds mean: better contact, faster polishing, less pressing time, less evaporation, and less pitch and polishing agent. No more old-fashioned cutting of channels; more facets, imagine the 8" produces 159, off-center, hexagonal facets. While the horizontal rows are straight the vertical rows are parallel arcs of the proper radius, a monumental task even with a computer. We know you will enjoy pouring a lap now, with this **NEW, NON-STICK MOLD.** Its unique material incorporates a built-in release agent for quick and easy release . . . just another of the many OPTICA b/c products that save you time and effort. Reusable, instructions included.

| Size | Stock No. |
|---|---|
| 4¼" | MPL-04 |
| 6" | MPL-06 |
| 8" | MPL-08 |
| 10" | MPL-10 |
| 12½" | MPL-12 |

## Paint, Flat Black




Use: wherever light reflection or glare presents a problem, such as: inside lens barrels, telescope tubes, darkrooms, observation rooms, etc. Application: spray, roll or brush. Durable, washable, fast drying, velvet-like finish. 1 pint covers about 80 sq. ft.

| | Size | Stock No. |
|---|---|---|
| **Regular Flat Black** | 1 pt. | PFB-16 |
| **Optical Flat Black** | 1 pt. | POB-16 |
| **Optical Flat Black Spray** | 6 oz. | POBS-6 |

What's the difference? Regular flat black has been used for years and is still being used on optical equipment, but it has much higher reflectance. The optical black is a result of recent advancement in paint technology, up to 50% more effective; reflection is practically 0.0%.

## Parts

All OPTICA b/c parts are available separately, such as threaded eyepiece tubes, eyepiece mounts, objective cells, mount toes, leveling bolts, casters, rotable tube assemblies (with or without saddle), etc., etc., etc., and etc.! Quotation on request.

## Pitch, Mirror Polishing




OPTICA b/c optical quality pitch meets the needs of the ATM. It is formulated, containing a number of carefully compounded ingredients.

| Quantity | Stock No. |
|---|---|
| ½ lb. | PHP-08 |
| 5 lbs. | PHP-80 |

Larger quantities—Quotation on request.

## Pointers, Setting Circle



Solid metal pointers—finished in black and white stripe line mark; predrilled for easy mounting. Can be adjusted to fit in tight places. Sold individually.

| Length | Stock No. |
|---|---|
| 1-1/4" (32mm) | PS-125 |
| 2-1/4" (57mm) | PS-225 |

Also see "Circles, Setting."



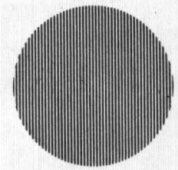


## Publications, Telescope Making

Over 20 publications on this subject. See Publications and AVA Catalog which includes over 300 additional books, globes, records, atlases, etc.

## Richest Field Optics (see Kits, Richest Field Optics)

## Screens, Ronchi Test

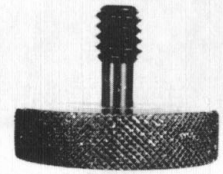


The Ronchi screen reveals at a glance the overall condition of your mirror's surface . . . an invaluable aid that uses the standard foucault testing equipment. It is also the simplest way to accurately evaluate those troublesome turned edges. Reproduced on sturdy acetate base. Round, 21mm diameter. Instructions included. Will fit into the OPTICA b/c Piggyback filter holder for easy mounting.*

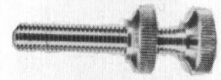
| Lines per inch | Stock No. |
|---|---|
| 60 lines/inch | SR-060 |
| 100 lines/inch | SR-100 |
| 120 lines/inch | SR-120 |
| 175 lines/inch | SR-175 |

*Piggyback filter holder not included in price. See "Holders, Piggyback Filter."

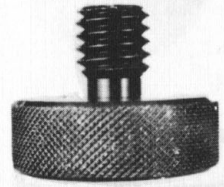
## Screws



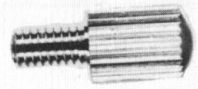
**1/4" DIAM., 20 THREADS/INCH.** 7/16" (11.1mm) shank length, knurled head, aluminum. Standard camera/tripod thread ..... **Stock No. S14-20**



**5/16" DIAM., 18 THREADS/INCH.** 2-3/8" (60.3mm) shank length, aluminum, same as on our Brackets, Star Finder. Complete with locking nut, knurled head. ..... **Stock No. S56-18**



**3/8" DIAM., 16 THREADS/INCH.** 1/2" (12.5mm) shank length, knurled head, black anodized aluminum ..... **Stock No. S38-16**



**3mm DIAM., 0.6mm PITCH.** 7mm (1/4") shank length, ribbed head, chrome-plated brass. Same as our eyepiece setscrew ..... **Stock No. S3mm-6**

## Slow Motion Controls



Commonly referred to as **flex arms.** Use them on all telescopes geared for slow motion to reduce vibration and eliminate awkward and uncomfortable positions. Sturdy, flexible, steel shafts, chrome plated with setscrew and plastic control knob. Fit up to ¼" drive shafts.

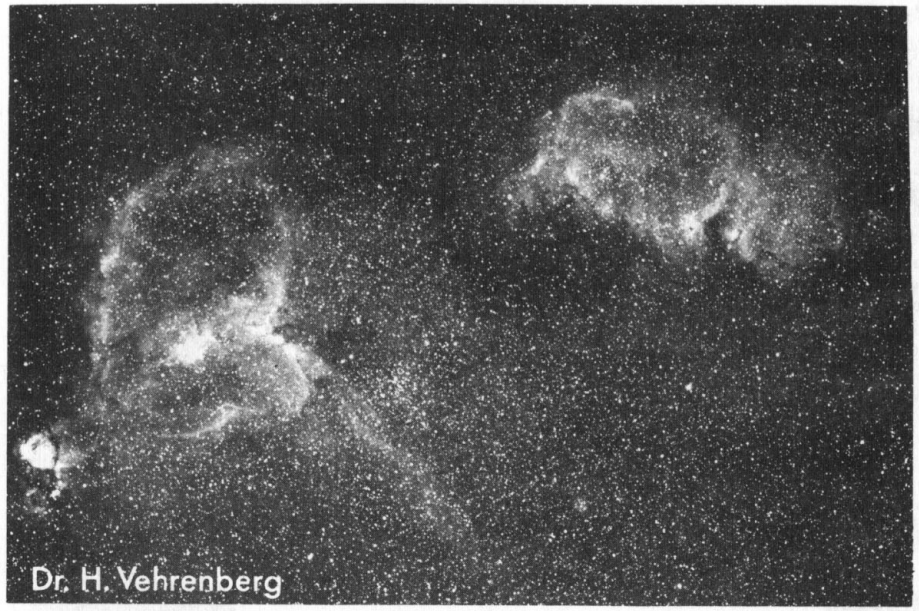
| Length | Stock No. |
|---|---|
| 14" | AF-014 |

## Solution, Focal Length Test

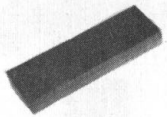



Test your mirror focal length while rough grinding. The solution produces an even, highly reflective coating that lasts for hours. Also helps in grinding by suspending compounds and slowing evaporation for even grinding action. Use one drop per wet. Supplied in 1 oz. plastic bottle.

**Stock No. SFLT-1**



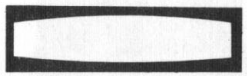

## Stone, Edging



Maintaining a bevel on the mirror and tool while grinding and polishing is absolutely necessary. This fine edging stone is for just that purpose. Don't suffer with a bad chip or ruin the surface of your mirror because of improper edging. One side of the stone is coarse #280 and the other is fine #400.

| Size | Stock No. |
|---|---|
| 3" x 1" x ⅜" | SE-003 |

## Templates, Mirror Grinding



Complete set of curved gauges to check the approximate focal length of your mirror during rough grinding. Saves much time over the other tests and eliminates wasted effort in fine grinding an improperly curved mirror. Each template has 2 curves, and is reusable an any size mirror up to 12½" diameter. You receive: 5 templates—10 curves for the price of one—plus complete instructions.

**Stock No. TMG-01**

## Threading Service, Eyepieces



A minority of telescope eyepiece manufacturers still insist on using non-standard threads or no threads at all in their eyepieces. If you are unfortunate enough to own some of these, OPTICA b/c can thread most of the non-standard oculars and thus enable you to enjoy the many advantages of filters and other accessories. Either 24.5mm or 1¼" can be threaded..... **Stock No. TSE-01**

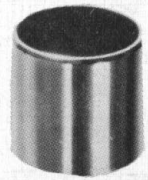
## Tube Assemblies, Reflector and Refractor

All tube assemblies, including accessories, are available as listed and illustrated in our Telescopes and Accessories & Supplies Catalog. Quotation on request.



# Tubes

## TUBES, EYEPIECE

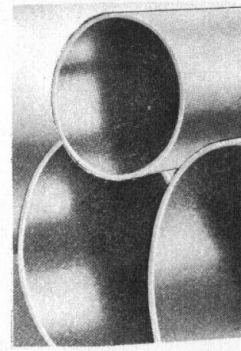


Chrome plated brass eyepiece tubes for making your own eyepieces, adapters, and a variety of other accessories. Threaded to accept standard filters.

| Outside Diameter | Length | Stock No. |
|---|---|---|
| 24.5mm (0.965") | 35mm (1.38") | TE-035 |
| 1-1/4" (31.7mm) | 40mm (1.57") | TE-040 |

Also see "Holders, Eyepiece Lens"

## TUBES, TELESCOPE, ALUMINUM



Seamless, lightweight, heavy-duty stability. See price list for sizes ava able.

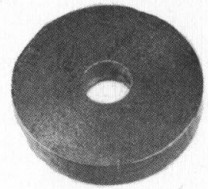
## TUBES, TELESCOPE, FIBERBOARD

Sturdy, spiral wound. We can cut to any length. Also available with resi impregnated on the inside for added strength and moisture resistance. Se price list for sizes available.

## BEFORE YOU ORDER YOUR TUBE . . .

Please note that all tubes are shipped COD for transportation charges See price list for details.

## Weights, Declination Axis



Machined, setscrew lock, black wrinkle finish. Fit standard 1" shaft. We also bore to any other shaft diameter of your specification.

| Weight | Stock No. |
|---|---|
| 2 lb. (0.9kg) | WDA-02 |
| 5 lb. (2.3kg) | WDA-05 |
| 15 lb. (6.8kg) | WDA-15 |

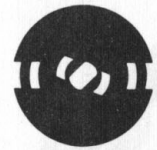
For tube counterweights, see Telescopes and Accessories Catalog.

## Wire, Reticle

Make your own crosshair or other design reticles with this professional reticle wire. Generous 24" length.

| Thickness | Stock No. |
|---|---|
| .001" | WR-010 |
| .0007" | WR-007 |

## Zone Testing Mask



The OPTICA b/c ZONE TESTING MASK is a precise measuring gauge that greatly facilitates the job of parabolizing your mirror. It isolates critical zones on the mirror and reduces the elusive foucault shadows to areas of similar grayness. The foucault test is thereby simplified and its accuracy greatly increased . . . A real must for every mirror maker, with instructions.

| Size | Stock No. |
|---|---|
| 4¼" | ZTM-04 |
| 6" | ZTM-06 |
| 8" | ZTM-08 |
| 10" | ZTM-10 |
| 12½" | ZTM-12 |

Also see "Kit, Mirror Testing."

# Celestron®

OPTICA b/c OFFERS A COMPLETE SELECTION OF CELESTRON PRODUCTS

## Exclusive, Customized Accessories for Celestron Produced by OPTICA b/c



### ADAPTER, CELESTRON EYEPIECE 2" (50.8mm)

Now you can utilize 2" eyepieces and accessories on Celestron 5" or 8" telescopes. Screws on, black anodized aluminum with eyepiece locking screw. ..... **Stock No. AE-02C $16.00**

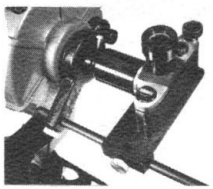
### TERRESTRIAL ZOOM EYEPIECE FOR CELESTRON



Observing your favorite land objects is a cinch. This eyepiece delivers erect images, correct left and right. Continuous zoom power ranges from 97x to 240x with the 8" and 60x to 151x with the 5".

**24.5mm for Celestron 5"** ..... **$59.95** ..... **Stock No. EZ83-2**
**1-1/4" for Celestron 8"** ..... **$72.50** ..... **Stock No. EZ83-1**

### CAMERA BRACKET FOR CELESTRON



Fully adjustable, rigid camera bracket supports weight of camera and couplers. The strain of a heavy camera and couplers should not rest on the lens mounting ring on the camera body, which is usually held in place by only three or four fine metric screws. Too much pressure can strip the screws and the whole setup will crash to the ground! Bracket attaches to threaded accessory mount, and supports entire photographic system. Three piece bracket, aluminum, attractive black anodizing and wrinkle finish. Specify 5" or 8". ..... **Stock No. BAC-01 $32.95**

### FOCUSER, RACK & PINION FOR CELESTRON



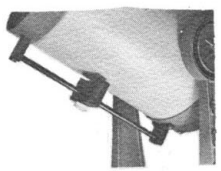
For 1-1/4" (31.7mm) eyepieces; eliminates any image shift when focusing. Same deluxe features as on the OPTICA b/c Professional Focuser Model FPRP-6. Screws onto Celestron 5" or 8" ..... **Stock No. FCRP-6 $52.66**

### ADDITIONAL ACCESSORIES

Eyepieces, Eyepiece Adapters, Crosshair Reticles, Cleaning Supplies, Battery Converters, Diagonals, Electric Drive Correctors, Erectors, Light Guards (eyepiece), Barlow Lenses, Sun Projection Screens, Solar Observation System, Spectroscopes, Variable Density Polarizing System, Filters, see the OPTICA b/c **Telescopes and Accessories Catalog.**

Astrophotography Camera Systems, Camera Brackets, Camera Coupplers*, Extension Tubes, Spectroscope Couplers, Films and Plates, Spectroscopic Emulsions, Bulk Film Loader, Processing Chemicals and Supplies, see the OPTICA b/c **Astrophotography Catalog.**

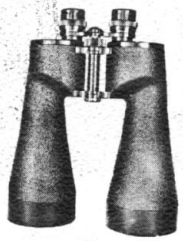
### SLIDING TUBE WEIGHTS FOR CELESTRON® 8"



Accurately balance heavy eyepieces, cameras and other accessories in seconds with sliding weight convenience. Bracket attaches quickly to mounting holes already on your instrument and need not be removed to put telescope in case. Bracket assembly includes two black anodized aluminum brackets, rod and screws.

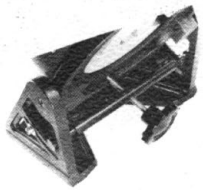
| | Price | Stock No. |
|---|---|---|
| Bracket Assembly (less Weight) | $22.95 | STWC-1 |
| 1 lb. weight | $ 5.70 | WTT-01 |
| 2 lb. weight | $ 7.40 | WTT-02 |
| 3 lb. weight | $ 9.40 | WTT-03 |

OPTICA b/c 4100 MacArthur Blvd., Oakland, California 94619 U.S.A.



## Astronomical Binoculars — 11x80

Designed for exciting, richest field astronomy. Imagine covering nearly 25° in area of the Milky Way! 11 power gives you 155% more magnification than the often recommended 7 X 50 size, and the large 80mm (3.1") coated objectives collect 250% more light - a carefully engineered balance for maximum brightness at night, twilight or in the shade. Enjoy spectacular closeups for sporting events, birdwatching, and nature studies too. Price includes lens caps, case, straps and tripod angle bracket. You'll really enjoy observing deep sky clusters and nebulae with these excellent quality binoculars ..... Reg. $199.00 **Stock No. BCB-01 Special $156.00**



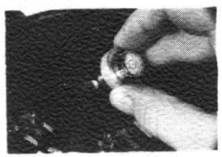
### DRIVE CORRECTOR SYSTEM

See OPTICA b/c Telescope and Accessories Catalogue for a highly functional Drive Corrector System for the Celestron 8.

### EYEPIECE THREAD-IN FILTERS AND SETS

See OPTICA b/c Telescope and Accessories Catalogue for savings on filters for Celestron Eyepieces.

## LATITUDE ADJUSTER FOR CELESTRON



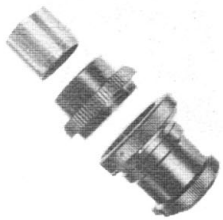
Greatly simplifies polar alignment. Critically adjusts telescope to exact latitude setting in seconds with a smooth screw adjustment. Installs immediately without tools.

**Latitude Adjuster for Celestron 5"** ..... **$29.95** ..... **Stock No. LAC-05**
**Latitude Adjuster for Celestron 8"** ..... **$29.95** ..... **Stock No. LAC-08**

### BUBBLE LEVEL FOR CELESTRON

Floating Bubble Level screws directly into the center of your Celestron Wedge in seconds to facilitate leveling in all directions.

..... **Stock No. MLBL-C $9.95**



### RICHEST FIELD SYSTEM FOR CELESTRONS

See and photograph astounding, super-wide field views of clusters, nebulae, comets through your Celestron 14, 8 or 5. Over 2X regular field and increases extended object brightness up to 400%. Simple as changing an eyepiece. Power variable. Use your regular 1¼" eyepieces.

The System includes: A Celestron Tele-Compressor, and extension tube, a coupling tube, a special visual adapter and instructions.

..... **Stock No. RFS-CI Special $75.00**

If you own a Celestron Tele-Compressor, all you need is an OPTICA b/c coupling tube and visual adapter. ..... **Stock No. VATC-C $29.50**

In addition to either of the above, C-5 owners using 24.5mm eyepieces need a converter. ..... **Stock No. C5VB-A $24.75**

## The Celestron Telescopes . . . . . Basic Specifications

| Feature | (astro) C90 | 750mm telephoto | 1250mm telephoto | C5 | C8 | C14 |
|---|---|---|---|---|---|---|
| Optical Configuration | Maksutov | Schmidt | Schmidt | Schmidt | Schmidt | Schmidt |
| Clear Aperature | 3.55" | 5" | 5" | 5" | 8" | 14" |
| Effective Focal Length | 1000mm | 750mm | 1250mm | 1250mm | 2000mm | 3900mm |
| Photographic Speed | f/11 | f/6 | f/10 | f/10 | f/10 | f/11 |
| Ocular Included | Yes[1] | No | No | Yes[2] | Yes[2] | Yes[4] |
| Near Focus—Approx. | 10' | 15' | 20' | 20' | 25' | 100' |
| Resolution | | | | | | |
| Arc Seconds | 1.3° | 0.9° | 0.9° | 0.9° | 0.5° | 0.3° |
| Lines per mm | 120 LPM | 333 LPM | 200 LPM | 200 LPM | 210 LPM | 171 LPM |
| Image Scale | 1.43°/in. | 1.1°/in. | 1.12°/in. | 1.12°/in. | .72°/in. | .37°/in. |
| Coverage | 35mm | 35mm | 35mm | 35mm | 35mm | 2¼x2¼ |
| Weight | 8 lbs. | 4 lbs. | 4 lbs. | 13 lbs. | 21 lbs. | 108 lbs. |
| Size/swingdown | 7"x7"x13" | 5.5"x10" | 5.5"x11" | 7"x8"x16" | 9"x12"x22" | 18"x22"x44" |
| Construction | All Aluminum | | | | | |

### CELESTRON CATALOGUE AND PRICE LIST

Send $2.00 for 32-page illustrated color catalogue on how to select and use a Celestron Telescope.

| PAGE No. | STOCK No. | | PRICE |
|---|---|---|---|
| 12 | SR-060 | | 1.35 |
| | SR-100 | | 1.50 |
| | SR-120 | | 1.75 |
| | SR-175 | | 1.95 |
| | S14-20 | | 1.17 |
| | S56-18 | | 1.65 |
| | S38-16 | | 2.45 |
| | S3mm-6 | | .50 |
| | AF-014 | pair | 18.81 |
| | | each | 11.28 |
| | SFLT-1 | | 1.37 |

| PAGE No. | STOCK No. | PRICE |
|---|---|---|
| 13 | SE-003 | 2.82 |
| | TMG-01 | 1.50 |
| | TSE-01 | 9.95 |
| 14 | TE-035 | 3.94 |
| | TE-040 | 4.86 |

## TELESCOPE TUBES

| TYPE | I.D. | O.D. | POUNDS PER FOOT (approx) | STOCK No. | PRICE PER FOOT | CUTTING CHARGE |
|---|---|---|---|---|---|---|
| Aluminum | 4 7/8" | 5" | 1 1/2 | TTA-05 | 3.36 | 1.70 |
| | 6 7/8" | 7" | 2 | TTA-07 | 6.13 | 2.39 |
| | 9 7/8" | 10" | 3 1/4 | TTA-10 | 14.40 | 3.90 |
| Fiberboard | 7" | 7 3/8" | 1 | TFB-07 | 2.19 | 1.00 |
| | 9 1/2" | 9 7/8" | 1 1/4 | TFB-09 | 2.98 | 1.35 |
| | 12" | 12 7/16" | 2 | TFB-12 | 3.77 | 1.70 |
| | 14" | 14 1/2" | 2 1/2 | TFB-14 | 4.40 | 2.00 |
| Fiberboard with resin impregnated | 6 15/16" | 7 3/8" | 1 1/4 | TFBR-07 | 3.42 | 1.00 |
| | 9 7/16" | 9 7/8" | 1 1/2 | TFBR-09 | 4.55 | 1.35 |
| | 11 15/16" | 12 7/16" | 2 1/4 | TFBR-12 | 5.84 | 1.70 |
| | 13 15/16" | 14 1/2" | 3 | TFBR-14 | 6.80 | 2.00 |

Add cutting charge to the cost of your tube length.
Odd lengths cost the same as the next full foot price.

All tubes are shipped C.O.D. for postage. Tubes measuring less than 108" combined length and circumference can be shipped reasonably anywhere in the contiguous U.S.A. Shipping costs vary from about $2.00 to $12.00 depending on size and distance shipped.

(Tube Diameter x 3.14) + Length = Combined length and circumference

Example: 7" O.D. tube, 50" long.

(7" x 3.14) + 50" = 72"

Tubes which exceed 108" combined length and circumference will be rather expensive to ship, probably over $20.00. Call any national trucking company for an estimate before ordering.

| PAGE No. | STOCK No. | PRICE |
|---|---|---|
| 14 | WDA-02 | 8.00 |
| | WDA-05 | 12.00 |
| | WDA-15 | 28.00 |
| | Boring larger than 1" - Free<br>Boring smaller than 1" - 9.95 | |
| | WR-010 | 2.95 |
| | WR-007 | 2.95 |
| | ZTM-04 | .30 |
| | ZTM-06 | .60 |
| | ZTM-08 | 1.06 |
| | ZTM-10 | 1.66 |
| | ZTM-12 | 2.60 |

THIS PRICE LIST SUPERSEDES ALL OTHER PRICE LISTS OR CATALOGS OF LOWER NUMBER. PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE. PLEASE ORDER BY ITEM, STOCK NO., SIZE AND PRICE.

OPTICA b/c

OPTICA b/c COMPANY
4100 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA 94619



# AMATEUR TELESCOPE MAKER'S CATALOG No. ATM-78 PRICE LIST

## ATM-78-A -- EFFECTIVE MAY 1978

| PAGE No. | STOCK No. | PRICE |
|---|---|---|
| 3 | MA-003 | $ .76 |
| | MA-015 | 2.85 |
| | ATCT-1 | 3.95 |
| | BAS-07 | 1.07 |
| | Added lenghts-per inch | .04 |
| | BW-002 | 1.18 |
| | BW-016 | 5.42 |
| | For Larger quantities quotation on request. | |

| PAGE No. | STOCK No. | PRICE |
|---|---|---|
| 3 | BF-002 | 19.95 |
| | BF-003 | 24.95 |
| | BF-005 | 45.95 |
| | BF-009 | 58.95 |
| | BF-011 | 71.95 |
| 4 | CSR-04 | 9.95 |
| | CSR-06 | 12.95 |
| | CSR-08 | 29.95 |
| | CSR-10 | 74.95 |

## COATING, MIRRORS, ALUMINIZING

| PRIMARY MIRRORS | | STOCK No. | PRICE |
|---|---|---|---|
| 4 1/4" (108mm) Diameter | | CMP-04 | 15.00 |
| 6" (152mm) | " | CMP-06 | 15.00 |
| 8" (203mm) | " | CMP-08 | 20.25 |
| 10" (254mm) | " | CMP-10 | 25.50 |
| 12 1/2" (317mm) | " | CMP-12 | 35.30 |
| Diagonal mirrors are aluminized free when sent with primary mirrors. | | | |
| SMALL MIRRORS AND ELLIPTICAL DIAGONALS | | | |
| 20mm (0.79") | Minor Axis | CMD-20 | 4.50 |
| 30mm (1.18") | " " | CMD-30 | 4.50 |
| 40mm (1.57") | " " | CMD-40 | 4.50 |
| 50mm (1.97") | " " | CMD-50 | 6.00 |
| 60mm (2.36") | " " | CMD-60 | 6.75 |
| 70mm (2.76") | " " | CMD-70 | 7.50 |
| 80mm (3.15") | " " | CMD-80 | 9.00 |
| STRIPPING & CLEANING - If mirrors require stripping off old aluminum or cleaning off residue such as pitch add $3.00. | | | |

## COMPOUNDS

| GRINDING COMPOUNDS | | QUANITY | PRICE | QUANITY | PRICE |
|---|---|---|---|---|---|
| SIZE | STOCK No. | | | | |
| #60 | CG-060 | 16 oz. | 3.26 | 5 lbs. | 9.70 |
| 80 | CG-080 | 16 oz. | 3.26 | 5 lbs. | 9.70 |
| 120 | CG-120 | 4 oz. | 1.91 | 5 lbs. | 9.90 |
| 220 | CG-220 | 2 oz. | .85 | 5 lbs. | 9.90 |
| 320 | CG-320 | 2 oz. | 1.04 | 5 lbs. | 14.90 |
| 400 | CG-400 | 2 oz. | 1.07 | 5 lbs. | 15.70 |
| FINISHING COMPOUNDS | | | | | |
| F145 | CF-145 | 2 oz. | .93 | 5 lbs. | 11.90 |
| F50 | CF-050 | 2 oz. | .97 | 5 lbs. | 13.10 |
| POLISHING COMPOUNDS | | | | | |
| Rouge | CPR-04 | 4 oz. | 1.32 | 5 lbs. | 9.40 |
| Cerium Oxide | CPCO-4 | 6 oz. | 3.82 | 5 lbs. | 29.00 |

| PAGE No. | STOCK No. | PRICE |
|---|---|---|
| 4 | CI-001 | 10.00 |
| 5 | TFS-05 | 23.95 |
| | TFS-06 | 28.22 |
| | TFS-12 | 50.45 |
| | TFS-25 | 100.92 |
| | FTP-4B | 11.55 |
| | FTP-04 | 8.91 |
| | FTP-5B | 13.62 |
| | FTP-05 | 10.98 |
| | FTP-8B | 49.81 |
| | FTP-08 | 33.83 |
| | FTP-12B | 79.19 |
| | FTP-12 | 29.29 |
| | FTP-25B | 79.19 |
| | FTP-25 | 63.83 |
| | FPRP-6 | 39.92 |
| | FPRP-8 | 57.02 |
| 6 | FSRP-E | 25.66 |
| | FSRP-0 | 14.75 |
| | FSRP-2 | 29.95 |
| | DMHE-1 | 3.95 |
| | DMH-32 | 7.50 |
| | DMH-40 | 10.00 |
| | DMH-53 | 13.75 |
| | DMH-60 | 18.75 |
| | VA-004 | 7.24 |
| | VA-006 | 8.14 |
| | VA-008 | 9.05 |
| | VA-010 | 9.95 |
| | VA-012 | 10.95 |
| | HEL-02 | 4.65 |
| | HEL-01 | 7.34 |

| PAGE No. | STOCK No. | PRICE |
|---|---|---|
| 7 | HPF-02 | 5.10 |
| | HPF-01 | 5.70 |
| | HPME-3 | 5.75 |
| | HPME-4 | 9.25 |
| | HPMP-06 | 13.50 |
| | HPMP-08 | 15.50 |
| | HPMP-10 | 21.50 |
| | HPMP-12 | 34.00 |
| | KFT-01 | 14.45 |
| | KMM-03 | 17.93 |
| | KMM-04 | 18.71 |
| | KMM-06 | 22.94 |
| | KMM-08 | 37.46 |
| | KMM-10 | 79.21 |
| | KMM-12 | 138.50 |
| | KMM-16 | 605.84 |
| | Reg. | Special |
| 8 | KMT-04 5.42 | 4.33 |
| | KMT-06 5.72 | 4.57 |
| | KMT-08 6.18 | 4.94 |
| | KMT-10 6.78 | 5.42 |
| | KMT-12 7.72 | 6.17 |
| | KRFL-1 | 132.17 |
| | KRFL-2 | 144.82 |
| | KRFL-3 | 174.82 |
| | KRFL-4 | 189.99 |
| | KRFL-5 | 202.64 |
| | KRFL-6 | 232.64 |
| | Reg. | Special |
| | KRFR-1 57.81 | 46.24 |
| | KRFR-2 70.46 | 56.36 |
| | KRFR-3 100.46 | 80.36 |
| | KRFR-4 74.21 | 59.36 |
| | KRFR-5 86.86 | 69.48 |
| | KRFR-6 116.86 | 93.48 |
| | KRFR-7 94.11 | 75.28 |
| | KRFR-8 106.76 | 85.40 |
| | KRFR-9 146.76 | 117.40 |

LENSES - REFRACTOR OBJECTIVES

| DIAMETER | FOCAL LENGTH | STOCK No. | PRICE | STOCK No. | PRICE |
|---|---|---|---|---|---|
| | | In Cell | | Without Cell | |
| 30mm (1.18") | 160mm (6.30") | LC-030 | 11.95 | L-0030 | 4.65 |
| 40mm (1.57") | 240mm (9.45") | LC-040 | 35.08 | L-0040 | 21.31 |
| 50mm (1.97") | 500mm(19.69") | LC-50a | 58.92 | L-050a | 26.32 |
| 50mm (1.97") | 750mm(29.53") | LC-50b | 49.51 | L-050b | 30.07 |
| 60mm (2.36") | 250mm (9.84") | ------ | ----- | L-060a | 18.96 |
| 60mm (2.36") | 910mm(35.83") | LC-60b | 67.70 | L-060b | 47.64 |
| 76mm (2.99") | 910mm(35.83") | LC-76a | 144.19 | L-076a | 106.58 |
| 76mm (2.99") | 1200mm(47.24") | LC-76b | 144.19 | L-076b | 106.58 |
| 80mm (3.15") | 300mm(11.81") | ------ | ----- | L-0080 | 35.36 |
| 101mm (3.97") | 600mm(23.62") | ------ | ----- | L-0101 | 55.26 |
| 108mm (4.25") | 1600mm(62.99") | LC-108 | 877.82 | L-0108 | 689.71 |

| PAGE No. | STOCK No. | PRICE |
|---|---|---|
| 9 | LB-001 | 3.95 |
| | Mg-010 | 3.95 |

MIRROR BLANKS

| DIAMETER | THICKNESS | STOCK No. | PRICE |
|---|---|---|---|
| 1 1/2" ( 38.1mm) | 1.00" (25.4mm) | MB-015 | 3.00 |
| 2" ( 50.8mm) | 1.00" (25.4mm) | MB-020 | 3.10 |
| 3" ( 76.2mm) | 1.00" (25.4mm) | MB-030 | 3.50 |
| 4 1/4" (108.0mm) | .75" (19.1mm) | MB-040 | 4.50 |
| 6" (152.4mm) | 1.00" (25.4mm) | MB-060 | 7.50 |
| 8" (203.2mm) | 1.375" (34.9mm) | MB-080 | 14.50 |
| 10" (254.0mm) | 1.75" (44.5mm) | MB-100 | 31.50 |
| 12 1/2" (317.5mm) | 2.125" (54.0mm) | MB-125 | 58.00 |
| 16" (406.4mm) | 3.00" (76.2mm) | MB-160 | 420.00 |

MIRROR TOOLS

| DIAMETER | STOCK No. | PRICE |
|---|---|---|
| 1 1/2" ( 38.1mm) | MT-015 | 3.00 |
| 2" ( 50.8mm) | MT-020 | 3.10 |
| 3" ( 76.2mm) | MT-030 | 3.50 |
| 4 1/4" (108.0mm) | MT-040 | 4.50 |
| 6" (152.4mm) | MT-060 | 5.96 |
| 8" (203.2mm) | MT-080 | 9.64 |
| 10" (254.0mm) | MT-100 | 31.50 |
| 12 1/2" (317.5mm) | MT-125 | 58.00 |
| 16" (406.4mm) | MT-160 | 125.00 |

| PAGE No. | STOCK No. | PRICE |
|---|---|---|
| 9 | PA-002 | 4.95 |

MIRRORS, FINISHED DIAGONAL

| MINOR AXIS mm | MINOR AXIS inches | POPULAR ELLIPTICAL STOCK No. | POPULAR ELLIPTICAL PRICE | PROFESSIONAL ELLIPTICAL STOCK No. | PROFESSIONAL ELLIPTICAL Price | ECONOMY RECTANGULAR STOCK No. | ECONOMY RECTANGULAR PRICE |
|---|---|---|---|---|---|---|---|
| 22 | 0.87 | MDPO-22 | 4.99 | MDPR-22 | 7.72 | ------ | ----- |
| 30 | 1.18 | ------- | ---- | ------- | ---- | MRD-30 | 4.05 |
| 32 | 1.26 | ------- | ---- | MDPR-32 | 13.00 | ------ | ----- |
| 33 | 1.30 | MDPO-33 | 8.40 | ------- | ---- | ------ | ----- |
| 38.6 | 1.52 | MDPO-38 | 12.07 | ------- | ---- | ------ | ----- |
| 40 | 1.57 | ------- | ---- | MDPR-40 | 19.50 | MRD-40 | 4.75 |
| 46.5 | 1.83 | MDPO-46 | 14.17 | ------- | ---- | ------ | ----- |
| 50 | 1.97 | ------- | ---- | ------- | ---- | MRD-50 | 5.40 |
| 53 | 2.09 | ------- | ---- | MDPR-53 | 32.00 | ------ | ----- |
| 54.4 | 2.14 | MDPO-54 | 17.32 | ------- | ---- | ------ | ----- |
| 60 | 2.36 | ------- | ---- | MDPR-60 | 48.00 | MRD-60 | 6.75 |
| 66 | 2.60 | MDPO-66 | 20.47 | ------- | ---- | ------ | ----- |
| 70 | 2.75 | ------- | ---- | MDPR-70 | 62.00 | ------ | ----- |
| 78.7 | 3.10 | MDPO-78 | 31.45 | ------- | ---- | ------ | ----- |
| 80 | 3.15 | ------- | ---- | MDPR-80 | 82.00 | ------ | ----- |

| PAGE No. | STOCK No. | PRICE |
|---|---|---|
| 10 | MPP-405 | 110.00 |
| | MPP-407 | 98.00 |
| | MPP-605 | 198.50 |
| | MPP-607 | 118.00 |
| | MPP-805 | 216.70 |
| | MPP-807 | 173.80 |
| | MPP-105 | 385.00 |
| | MPP-107 | 308.00 |
| | MPP-125 | 616.00 |
| | MPP-127 | 495.00 |
| | MP-608 | 46.33 |
| | MP-807 | 79.93 |
| | MP-128 | 226.33 |

| PAGE No. | STOCK No. | | PRICE |
|---|---|---|---|
| 11 | MPL-04 | | 2.79 |
| | MPL-06 | | 3.36 |
| | MPL-08 | | 3.71 |
| | MPL-10 | | 5.25 |
| | MPL-12 | | 8.20 |
| | PFB-16 | | 2.99 |
| | POB-16 | | 10.24 |
| | POBS-6 | | 7.49 |
| | PHP-08 | | 2.04 |
| | PHP-80 | | 16.48 |
| | PS-125 | each | .95 |
| | PS-225 | each | .95 |