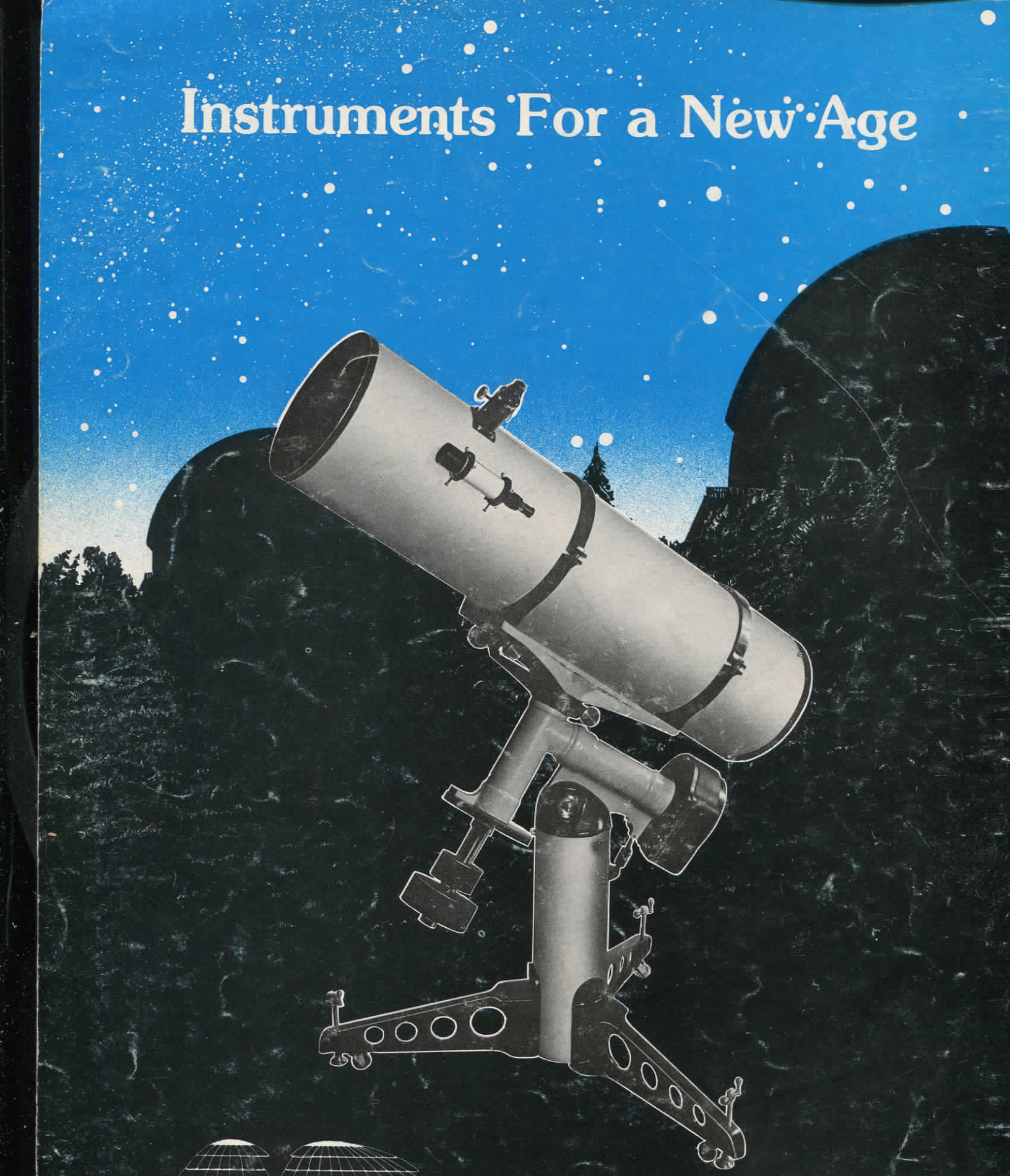
Instruments For a New Age



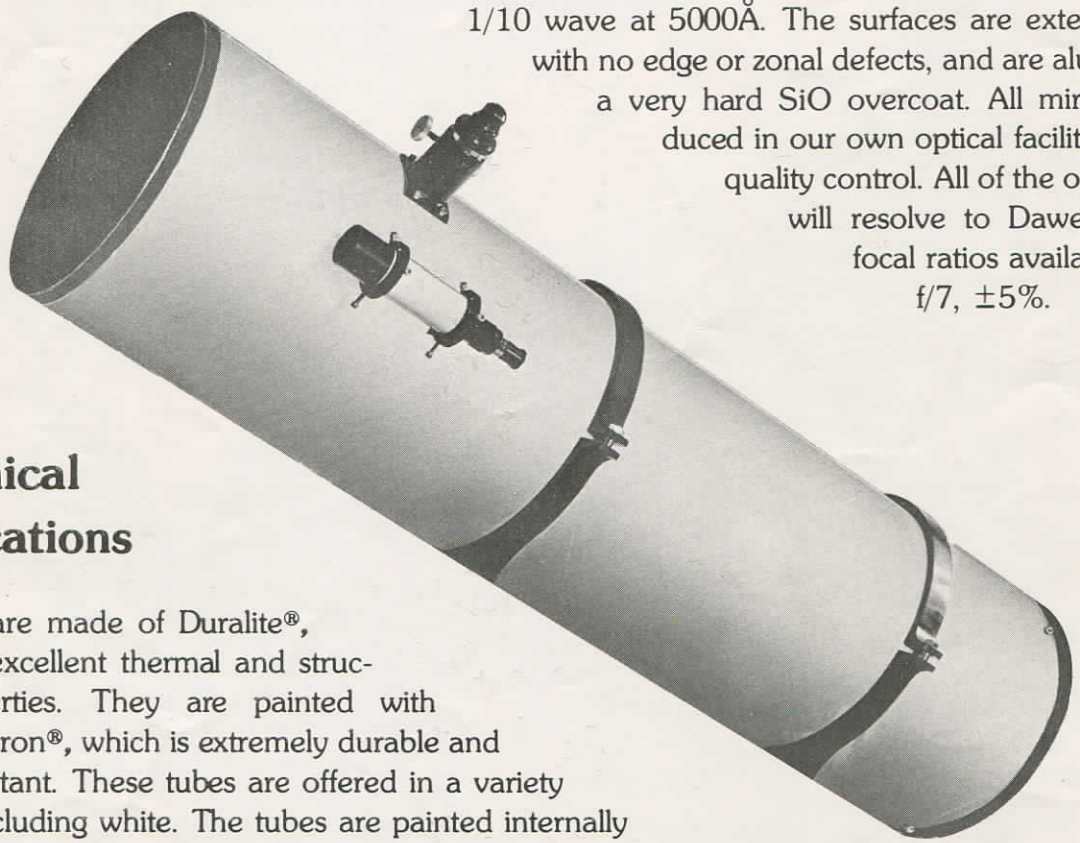
TELESCOPE WORLD®

Telescope World

Tube Assembly

Optical Specifications

The optical elements are made of Pyrex® Brand #7740 molded and fine annealed glass. All of the optical surfaces are guaranteed 1/10 wave at 5000Å. The surfaces are extemely smooth with no edge or zonal defects, and are aluminized with a very hard SiO overcoat. All mirrors are produced in our own optical facility for ultimate quality control. All of the optical systems will resolve to Dawes Limit. The focal ratios available are f/4 to f/7, ±5%.



Mechanical Specifications

The tubes are made of Duralite®, which has excellent thermal and structural properties. They are painted with Dupont® Imron®, which is extremely durable and scratch resistant. These tubes are offered in a variety of colors including white. The tubes are painted internally with a flat black, formulated by Telescope World. Black anodized aluminum end rings compliment the finished tube assembly.

A cast aluminum mirror cell with 9-point floatation system is used to mount the primary mirror. The mirror cell is designed to allow free air circulation around the primary mirror. The diagonal holder is machined from aluminum and features a continuous retaining ring with 3-point collimation. The spider has an aluminum center body with stainless steel vanes for strong support. A 2-inch focuser with an 1¼-inch adaptor is standard. The focuser has a 3-inch travel for easy access to both visual and photographic focus. An 8×50 finder scope in low profile mounting rings is also standard.

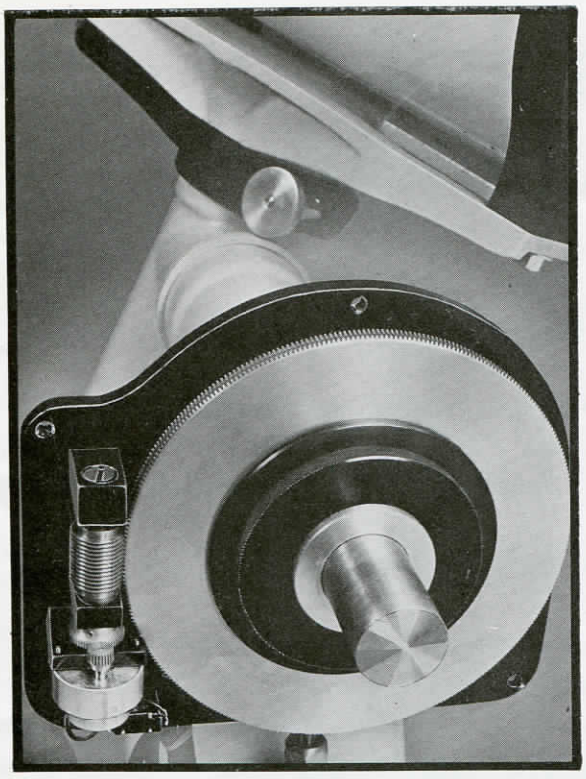
12-HD Mounting

Features:

- 2" diameter stainless steel shafts.
- 4½" diameter housings cast of 6061 aluminum.
- Massive cast aluminum legs with 8" diameter aluminum column.
- 25" cast cradle.
- 10" polar drive.
- 10" radius declination tangent arm.
- 10" setting circles.
- Precision latitude reaction rod.
- Precision leveling pads.

This mounting is designed for absolute rigidity. It is the product of five years of design and testing, manufactured to the highest standards of quality for a lifetime of excellent performance.

We use massive Sealmaster® ball bearings on both axes. All screws and fasteners are stainless steel. All of the castings are 6061 aluminum, and are painted with Dupont® Imron® for lasting durability. For alignment on north celestial pole, a precision latitude adjuster is used that moves the R.A. axis 30 minutes per revolution in altitude for quick and accurate alignment. Massive levelers with hand cranks provide quick and stable leveling. The tube cradle rings are adjustable to provide tube rotation. The mount breaks down into three sub-assemblies for easy transportation. Rigidity is assured in all telescope orientations. Vibration-free performance is standard. Each mounting is completely machined and assembled in our factory and fully tested before shipment.



Polar Drive

The polar drive (left) incorporates the finest components available. The heart of the drive unit is a 10-inch diameter worm gear of 32 diametral pitch. Its 315 teeth have a lead variation of less than .00006 inches R.M.S. The gear is fit onto a slip clutch with a knurled friction adjustment ring. The worm turns in lapped oilite bearings which are mounted in a line bored milled housing. The polar drive uses a ½ R.P.M. motor and brass reduction gears which track at a rate of 1 revolution/1436.4 minutes. In final assembly, the drive is mounted and precision lapped to provide ultimate smoothness. There is no backlash in this system which makes astrophotography a joy. The drive is available in either 110v/60Hz or 220v/50Hz.

Declination Drive

The declination drive unit consists of a tangent arm of 10-inch radius which gives the highest precision in declination motion. The tangent arm assembly has a large surface area clutch with knurled friction adjustment knob. It has a ½-20 UNF-class 4 lead screw mounted in oilite bushings with a brass follower and stainless steel swing arm. The assembly is precision lapped to insure smooth operation and is standard with a knurled knob for manual declination control. Shown at the right is the optional 12v DC servo-drive unit with precision drive belt. This unit provides the ultimate in telescope control when used in conjunction with the dual axis drive correcter.

Accessories and Optional Equipment

Multi-Coated Eyepieces

All eyepieces are threaded for filters.

- **Series 2 Modified Achromatic Eyepieces (1¼" O.D.)** — Highly corrected, multi-coated. The best in moderately-priced eyepieces. Focal lengths: 6, 9, 12, 25, 40mm.
- **Series 2 MA 40mm Extra-Wide-Field (1¼" O.D.)** — Yields widest field of view obtainable with 1¼" O.D. eyepiece. Multi-coated.
- **Series 2 Orthoscopic Eyepieces (1¼" O.D.)** — Excellent 4-element high resolution optics, multi-coated, parfocal. Focal lengths: 4, 6, 9, 12.5, 18, 25mm.
- **Research-Grade Orthoscopic Eyepieces (1¼" O.D.)** — For advanced observers, the very finest eyepieces obtainable. 7-layer multi-coated, parfocal optics. Focal lengths: 4, 7, 10.5, 16.8, 28mm.
- **Research-Grade Erfle 20mm (1¼" O.D.)** — For superb wide-angle viewing, 7-layer multi-coated, parfocal optics.
- **Series 1: 2" Eyepieces** for low power views. 32mm Erfle, 55mm Plossl.

2× Telenegative-Amplifier (1¼" O.D.)

The finest in high-resolution, large-aperture Barlow lenses. Multi-coated. Doubles the power of individual eyepieces. Also available with 3× amplification factor.

Vinyl Dust Covers

Press-fit snugly over the ends of the tubes.

Photo-Visual Color Filters

Thread into all 1¼" O.D. eyepieces, for increased resolution of lunar and planetary detail. Wratten Nos. and Colors: #8 (Light Yellow); #11 (Yellow-Green); #12 (Yellow); #21 (Orange); #23A (Light Red); #25A (Red); #47 (Violet); #58 (Green); #80A (Blue); Polarizer (30% transmission).

Accessory Cases

Rugged polyethylene. For dust-free protection of eyepieces. Barlows, filters.

C-90 Photo-Guide Telescope with 1¼" Right Angle

Camera Adapters

Adapt your 35mm camera for through-the-telescope photography, both eyepiece-protection and prime-focus. When ordering, specify whether 1¼" O.D. or 2" O.D. and your camera brand.

Illuminated Reticle System

With dual cross hair 1¼" eyepiece and battery pack.

Electric Controls

- **Phase II** — Single axis declination controller, which includes D.C. dec. motor. 9-volt battery included.
- **Phase III** — Single axis joystick drive corrector. AC and DC.
- **Phase IV** — Dual axis control system with declination motor. 12-volt DC and 110-volt AC.
- **Basic** — Pushbutton drive corrector for 12-volt DC.

Piggyback Mount

Fits 12¼-14¼ telescopes, for mounting C-90 or a camera.

Tube Counterweight System 20" long bar with two 2.5 pound weights.

Nebular Filter Comes in 1¼" thread or a 2" thread in to eyepiece.

Solar Filter

- **Broad Band,** Crown glass with Inconel® coating. Made in off-axis design with a wood case.
- **Hydrogen Alpha Filter,** .5Å, 17Å, 1.0Å

Permanent Pier unit also available.

Ordering Information

How to Order:

Write a letter stating your requirements or give us a phone call at (415) 538-0815.

Payment:

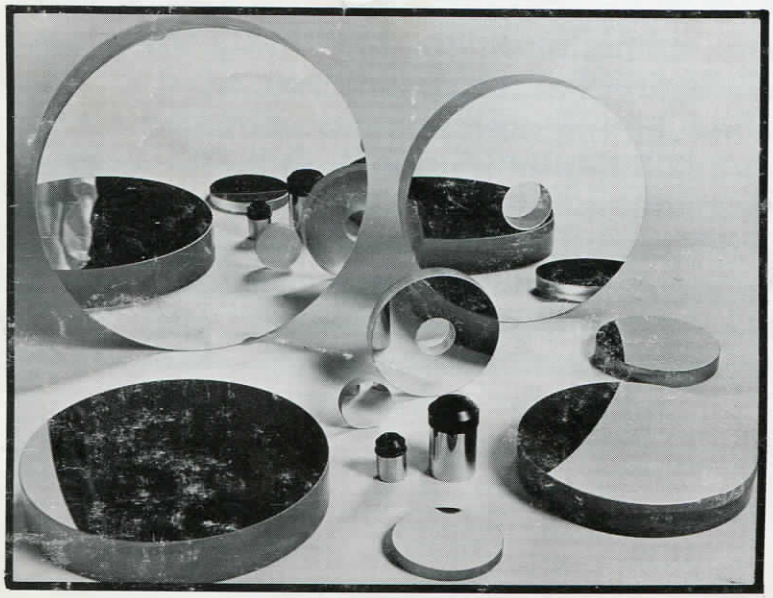
All orders require 50% deposit. Payment can be made by Master Charge, Visa, bank draft, money order and personal check which will have to clear. We also send C.O.D. with 50% deposit.

Shipping and Crating Charges:

All instruments are shipped F.O.B. Hayward, California. A $70 crating charge on complete telescope. All systems are shipped within 30 days unless otherwise noted.

TELESCOPE WORLD®

26625 Mission Boulevard • Hayward, Calif. • (415) 538-0815



Custom Large Astronomical Mirrors

Prices and specifications available on request.

Telescope World Prices

Effective December 1, 1979

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Newtonian 12⅝" Telescope	$1,795.00
Newtonian 14½" Telescope	$2,349.00
Newtonian 16" Telescope	$3,589.00
Multi-Coated Eyepieces: (1¼")	
Series 2 Modified Achromatic	$19.95
Series 2 Modified Achromatic Extra W.A.	$24.95
Series 2 Orthoscopic	$27.95
Research-Grade Orthoscopic	$38.95
Research-Grade Erfle	$44.95
Series 1 (2") Erfle	$75.95
Plossl	$79.95
2X Telenegative-Amplifier	$29.95
Vinyl Dust Covers; 12⅝"-14½" (Set)	$15.95
Photo-Visual Color Filters (Each)	$7.95
Accessory Cases: Large	$17.95
Small	$12.95
C-90 Photo-Guide Telescope	$197.00
Camera Adapters: 1¼"	$27.95
2"	$28.95
Illuminated Reticle System	$47.50
Electric Controls: Phase 11	$79.95
Phase 111	$74.95
Phase 1V	$178.95
Basic	$49.95
Piggyback Mount	$18.50
Tube Couterweight System	$22.95
Nebular Filter 1¼"	$64.95
2"	$98.95
Solar Filter, Broad Band (100)mm	$109.50
Hydrogen Alpha Filter	P.O.R.
Permanent Pier	P.O.R.