THE 4-INCH DYNASCOPE REFLECTOR

Reg. U. S. Pat. Off.

Complete Professional Telescope WITH HIGHEST PRECISION OPTICS

— . . . . . THIS MODEL NOW SUPPLIED WITH IMPROVED STEEL LEGS.

This fine all-achromatic instrument has been especially designed for the amateur astronomer and is engineered to meet the most exacting professional specifications. Each part is scientifically coordinated so that the complete unit operates with the maximum degree of efficiency. The 4-inch paraboloid mirror insures high critical performance; and the rack and pinion focusing provide simplicity of operation. Although the Dynascope has many refinements not found in popular-priced telescopes, modern production methods have kept its cost amazingly low.

THE CRITERION MANUFACTURING COMPANY

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WHY WE MADE THE DYNASCOPE

Interest in the universe around us has taken tremendous strides within recent years. The science of astronomy is as old as history itself. Yet today it is more popular than ever before. The possibility of travel to other celestial bodies has fired the public imagination and literally hundreds of thousands of people, both young and old, have become fascinated by the limitless wonders of astronomy.

In taking up this field of science, the amateur is immediately faced with a major problem: how to obtain a really good telescope at low cost. A fine instrument has previously cost hundreds of dollars. To avoid this substantial investment, the amateur astronomer has been forced to build his own apparatus. This, however, requires a high degree of technical skill and many days, even months, of exacting labor. And the final result may prove to be disappointing.

There is, therefore, a great need for a professionally made and assembled telescope that will meet the demands of the serious-minded astronomer. It must also, without any sacrifice in quality, be produced within the price range of the average person's pocketbook. After years of research and experimentation, we fully believe that the Dynascope meets that challenge.

The Dynascope is a reflector because this type of telescope collects much more light than a refractor instrument of comparable size. In a reflector, the light does not have to pass through an objective lens and thus produces exquisite definition.

There are two types of reflecting mirrors: spherical and parabolic. In the spherically figured mirror, all light is reflected to a point *only* when the light emanates from the center of curvature. This is the kind of mirror commonly found in inexpensive reflecting telescopes. The paraboloid mirror of the Dynascope, however, reflects *all light* coming from infinity to a point and is, therefore, much to be preferred by the astronomer.

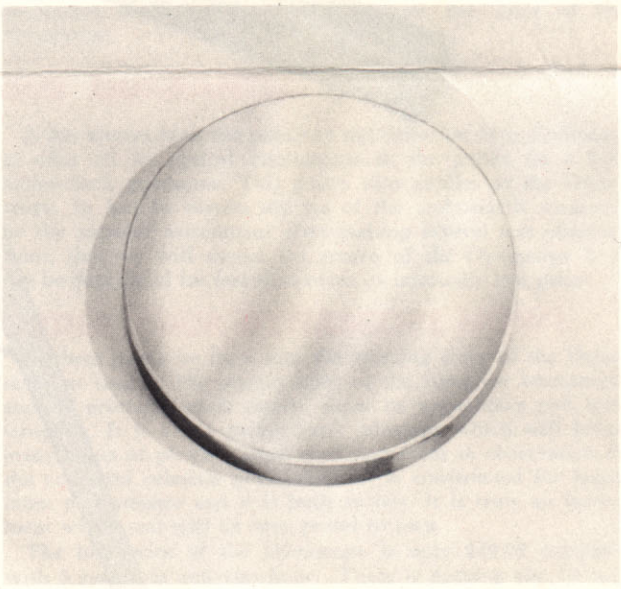
Another major factor in the efficacy of operation of a reflecting telescope is the adjustment of the eyepiece. In the usual low-priced instrument, this delicate adjustment must be made by sliding the piece in and out by hand to obtain the proper focus. This operation is extremely difficult and usually disturbs the setting of the entire instrument. The Dynascope, however, has a rack and pinion device so that exact focus can be obtained simply by turning the focusing wheel.

These two basic features of the Dynascope put it in a class by itself among professional instruments available at a low price. They are described in greater detail in the following pages. The Dynascope also has many other features which are covered further on in the text.

In selecting a reflecting telescope for amateur astronomy, it should be remembered that a satisfactory instrument *must* have a paraboloid mirror as it is the most efficient—and the most costly—type of reflector available today. Also, for exact focusing and ease of operation, there is no other method comparable to the rack and pinion device of the Dynascope.

We are proud to present the Dynascope to the enthusiastic astronomers of America and the world. We believe that it meets every specification they have long been waiting for. The optical system of the Dynascope is *completely* achromatic. It is easy to operate and its definition is truly superb. It will automatically follow heavenly bodies in their celestial courses. It is readily portable. It is substantially and sturdily made and will operate at the peak of efficiency for many years to come. And, finally, it is priced so low that no amateur astronomer need be without it.

THE DYNASCOPE MIRROR



This superbly figured 1/8 wave mirror is made of the finest optical glass, 4″ in diameter and 5/8″ thick, with a focal length of 45″. It is ground and polished to most exacting specifications by experienced craftsman. Of first importance is that it is not spherical as low-priced mirrors are, but *parabolic* which, as has been said, reflects *all light* from infinity to a point.

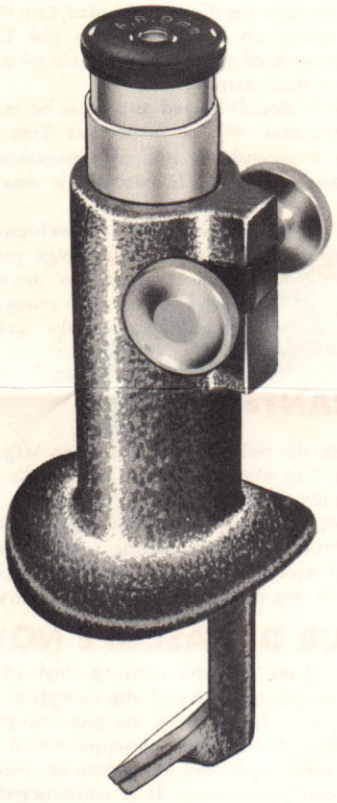
The "heart" of a reflector telescope is its mirror and the "size" of such a telescope is determined by the mirror's diameter. The larger the mirror, the greater its light-gathering power. Even a slight increase in the diameter will, because of the greater surface area, collect much more light. For example, a 4″ mirror gathers 1/3 more light than a 3½″ mirror.

The most important characteristic of a mirror is its resolving power, i. e. the ability to separate objects which are close together and show them as individual entities. The Dynascope mirror with its high resolving power will separate double stars with perfect definition.

The Dynascope parabolic mirror gathers much more light and thus gives far greater definition, superbly fine resolution, and also completely eliminates abberations. It is accurately tested for parabola on both Foucault test and Ronchi Screen test. The mirror is aluminized by the vacuum chamber process. As a protection against long use, it is overcoated with a layer of Zircon quartz and, with reasonable care, should last indefinitely.

The Dynascope mirror is enclosed in a dust-proof brass cell where it is mounted on all bearing surfaces with rubber matting, completely protecting it from shock. Any positioning or aligning of the mirror is easily made by tension screws.

THE EYEPIECE UNIT



This unit is complete with diagonal, rack and pinion, and provides the *only* satisfactory means of getting the delicate and exact adjustment which is absolutely necessary when focusing upon a celestial object. This device has previously been found only on high-priced professional instruments. All that is necessary to arrive at a perfect focus is to turn the adjusting wheels until the image is brilliantly clear.

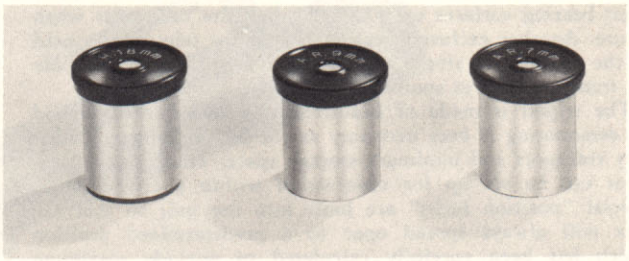
The mounting is precision cast iron with aluminum focusing wheels and a brass draw tube, chromium plated. The diagonal mirror is ground and polished to a ¼ wave tolerance and is aluminized by the vacuum chamber process with the same care given to the 4" parabolic mirror. It is firmly set in permanent alignment. The eye-pieces are easily changed when a different power is desired.

This Dynascope eyepiece unit requires no attention throughout the life of the instrument. Adjustments are never necessary as they are permanently made at the factory and are unconditionally guaranteed to be correct.

THE THREE EYEPIECES

Each Dynascope, is supplied with these three eyepieces, for a full range of power, without extra charge. The achromatic eyepieces in combination with the achromatic mirror makes the Dynascope the first totally achromatic telescope in the low-priced field.

These are not "simple eyepieces." They are of the compound type, which are only to be found in quality instruments. All elements are threaded; and the lenses are made with crown and flint glass cemented together. Professionally designed, they give comfortable observation with flat, sharp, extra wide fields. Working with the paraboloid mirror, they provide much greater power with breath-taking definition and brilliance. The Dynascope, by actual test, has shown that it is capable of resolving power of better than two seconds of arc separation. The optical system can split the finest "doubles" and resolve any of the planets with ease.



18mm Huygens for 65 power | 9mm Achromatic Ramsden for 130 power | 7mm Achromatic Ramsden for 167 power

THE EQUATORIAL MOUNT

This unit is precision cast in cast iron to give it weight for maximum stability, and is handsomely finished in wrinkle black. There are three wing-nut adjustments: Declination, Right Ascension, and for changing from Equatorial to Alt-Azimuth for general observation. The Right Ascension movement is held to a close tolerance and packed with a special lubricating compound for smoothly sensitive, jerk-free operation. The movement is locked at any point by simple pressure with the fingers on the adjustment screw.

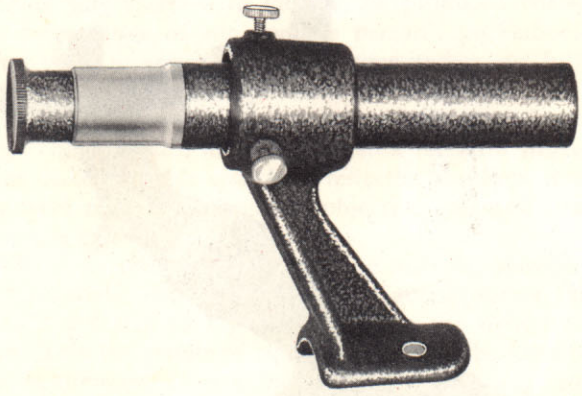
MORE THAN 100 LEADING COLLEGES, SCHOOLS PLUS THOUSANDS OF AMATEURS ARE USING DYNASCOPES!

With this equatorial mount a celestial object is automatically tracked through its trajectory or course across the sky. To keep a star or other body in view, the only adjustment required by the observer is to move the telescope laterally. The angle of ascent and descent of the object is automatically taken care of by the equatorial mount.

An exclusive feature of the Dynascope mount is its four-point bearing surfaces on which the Bakelite tube rests when in use. Another exclusive feature is that the telescope is held on the saddle by a single bolt so that it is *instantly removable* for transportation to another site.

The tripod is made of beautifully finished hardwood and no demounting is ever necessary as the legs fold together for easy transport and minimum storage space. The entire instrument can be set up for observation within a few seconds. Special "position locks" are built into the unit so that the legs will always spread open to a predetermined position which has been carefully calculated to provide maximum stability for the telescope. Because of these features, the Dynascope is really portable, can be carried easily, and set up with a minimum of preparation.

THE DYNASCOPE VIEWFINDER



This finder is 4-power with built-in cross-hair and the objective is achromatic and coated. It is specially designed to provide an extra-wide field of vision for maximum ease in spotting. Alignment is made by the three adjusting screws. The tubing is of aluminum, threaded throughout for easy disassembly. It is chrome-plated at the observation end and wrinkle-finished on the barrel.

The viewfinder is a complete precision telescope in itself. Since it would be extremely difficult to locate a celestial object without a finder on a reflecting telescope, the unit is furnished with each Dynascope as standard equipment and without extra charge.

THE BAKELITE TUBE

The dynascope tube is a full 45" long and made of substantial Bakelite, assuring the astronomer of many years of regular use. Because of its rigidity, all parts always remain in perfect alignment. The tube is smartly finished in dull flat optical black.

THE DYNASCOPE'S PERFORMANCE

The Dynascope is a precision-made instrument which combines the basic mechanical and optical characteristics of a professional telescope. These have been engineered and co-ordinated to work together with the highest possible degree of accomplishment. Celestial objects such as Jupiter, Saturn, Mars, Venus, Star Clusters, and the Great Nebulae can be observed with brilliant accuracy. So breathtaking is the Dynascope's definition that it has amazed the many professional astronomers to whom it has been demonstrated.

Every Dynascope is doubly tested and must be mechanically as well as optically correct to pass inspection. Test patterns of extremes, such as 2 seconds of arc of separation, must be flawlessly reproduced before a Dynascope is finally okayed for shipment.

The Dynascope is indeed the proudest development of the Criterion organization. Made to fit the average purse, it has many features never heretofore available at anywhere near its unusually low cost. In actual tests it has outperformed in resolution instruments selling for twice the price of the Dynascope.

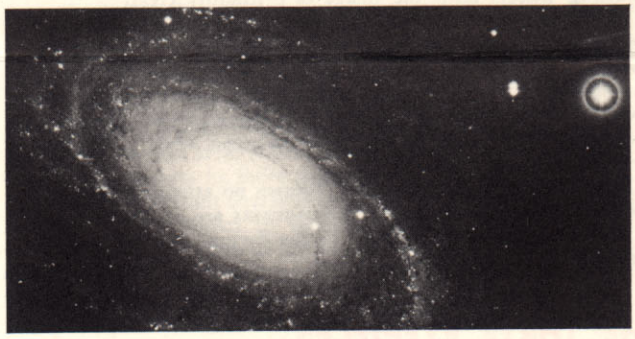
OUR GUARANTEE

It has always been the policy of the Criterion Mfg. Company to offer all its optical instruments to the public on a full money-back guarantee. This policy also applies to the Dynascope. In fact so certain are we of the enthusiastic response by the amateur astronomer after making several test observations, that we will accept the return of the Dynascope if it can be duplicated for less than twice its unusually low price.

ORDER YOUR DYNASCOPE NOW!

In these pages we have told the amazing story of the Dynascope at length. The photographs of the complete instrument and its principal parts clearly show its appearance and construction. It is a fine professional telescope which will bring many hours of pleasant study and enjoyment in observation of the countless celestial phenomena. It is constructed for maximum performance and it is built to last. It is truly an instrument which you will be very proud to own.

The low price of the Dynascope is only $49.95 complete with 3 eyepieces and viewfinder. There is nothing else to buy. Its packed weight is 16 lbs., and it is shipped f.o.b. Hartford, Conn., with express charges collect. Use the order form now and your Dynascope will be sent to you immediately on our full money-back guarantee.



Spiral nebula in Ursa Major.
by courtesy of
Mount Wilson and Palomar Observatories

DYNASCOPES ARE SHIPPED COMPLETELY ASSEMBLED, FULLY TESTED, WITH INSPECTOR'S REPORT AND READY FOR USE.

4" DYNASCOPE COMPLETE WITH 3 EYEPIECES, FINDER, TRIPOD, END COVERS. . . . . 49.95 COMPLETE

F.O.B. HARTFORD, SHIPPING WT. 16 LBS.

ACCESSORIES BOOKLET AND 272 PAGE "HANDBOOK OF THE HEAVENS" PLUS "REVOLVING STAR EXPLORER" SENT WITH EACH DYNASCOPE

NOW-NEW DELUXE 4" DYNASCOPE Reflector with ADVANCED Precision Features Offers A Truly Professional Telescope COMPLETE

FOR ONLY **$79.95**

F.O.B. Hartford, Conn.
Shipping Wt. 21 lbs.
Express charges collect

(MODEL K2 DELUXE)

Compare these advanced features with any telescope at double the price!

1. 4-inch Parabolic mirror—pyrex, finished to exacting specifications and guaranteed to perform to the limit of resolution! Aluminized and zircon quartz overlaid to insure maximum protection and lasting use! (The 4-inch mirror gathers ⅓ more light than any comparable 3½ inch mirror.)
2. **NEW** improved cast iron, true Equatorial and Alt-Azimuth mount with free moving Polar Axis Rod complete with friction adjustments for any latitude, declination, and ascension. Rugged, weighs approximately 12 pounds, both axes ⅝ inch steel supported on 4 bearing surfaces and guaranteed for vibration free action and necessary smoothness.
3. **NEW** 1¼ inch eyepiece mount with *exclusive double draw focus* and rack and pinion. Adjustable for 3 inches of travel to accommodate any eyepiece negative or positive! Built in diagonal mirror accurate to ⅛ wave tolerance.
4. 3 eyepieces—18MM Huygens, 9MM achromatic Ramsden, 7MM achromatic Ramsden for 65X, 130X and 167X.
5. 4-power achromatic finder-scope with crosshairs. Extra large field of view.
6. **NEW** covers for eyepiece tube and open end!
7. **NEW** bakelite tube beautifully finished in grey wrinkle enamel!
8. **NEW** improved hardwood folding tripod legs in natural finish. Sturdy, balanced, perfect portability!

Inquire for details of convenient Time-Payment Plan.

THE ULTIMATE IN 4-INCH TELESCOPES *Prove it yourself at NO RISK!*

Here at last is the scientific instrument that serious astronomers have been waiting for—with a full warranty of highest accuracy at lowest cost!

Now you needn't spend $150 and up to be sure of high-precision observation. Nor do you need go to the time and trouble of building your own telescope to get the most value for your money. For the dollar-and-cents facts about the *new* DeLuxe 4-inch Dynascope are these: The advanced precision features are those *you would want to select for yourself*. But buying them singly, as an individual, you could never beat our low price. Nor could you hope to surpass the technical co-ordination and stability that have been engineered into this superb instrument to meet the most exacting standards of optical and mechanical superiority!

Fully achromatic, tested and proven by scientists in leading planetaria, the *new* DeLuxe Dynascope comes to you complete with every part and feature exactly as described and illustrated here. Each instrument is carefully triple-tested before shipment and is accompanied by the Inspector's performance report. Specially packed, it is ready to be set up for observation within a few seconds. Shipment is F.O.B. Hartford, Conn., express charges collect (weight 21 pounds). There is nothing else to buy, no added charges, no extras of any kind.

YOU WILL BE DELIGHTED—OR MONEY BACK!

Prove to yourself—without risk—how good the *new* DeLuxe Dynascope really is. Order it now. Try it at your own pleasure. Compare its performance with that of any other professional telescope at double the cost or more. It will delight you and exceed your every expectation—or simply return it within 30 days for a full refund. But don't delay. As you know, quality engineering of precision instruments does not permit mass production. Consequently the supply is limited. To assure yourself of immediate delivery, send your check or money order today!

This Deluxe 4" Dynascope is now also available with semi-rotating saddle, chromed steel tripod, and Dyn-O-Matic Electric Drive as follows:

4" Deluxe with semi-rotating saddle, steel tripod (Model K-2B).....$89.95 FOB Htfd
4" Deluxe (Model K-2A) with above and Dyn-O-Matic Electric Drive.....$109.95 FOB Htfd

THE CRITERION MANUFACTURING COMPANY

Manufacturers of Quality Optical Instruments

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