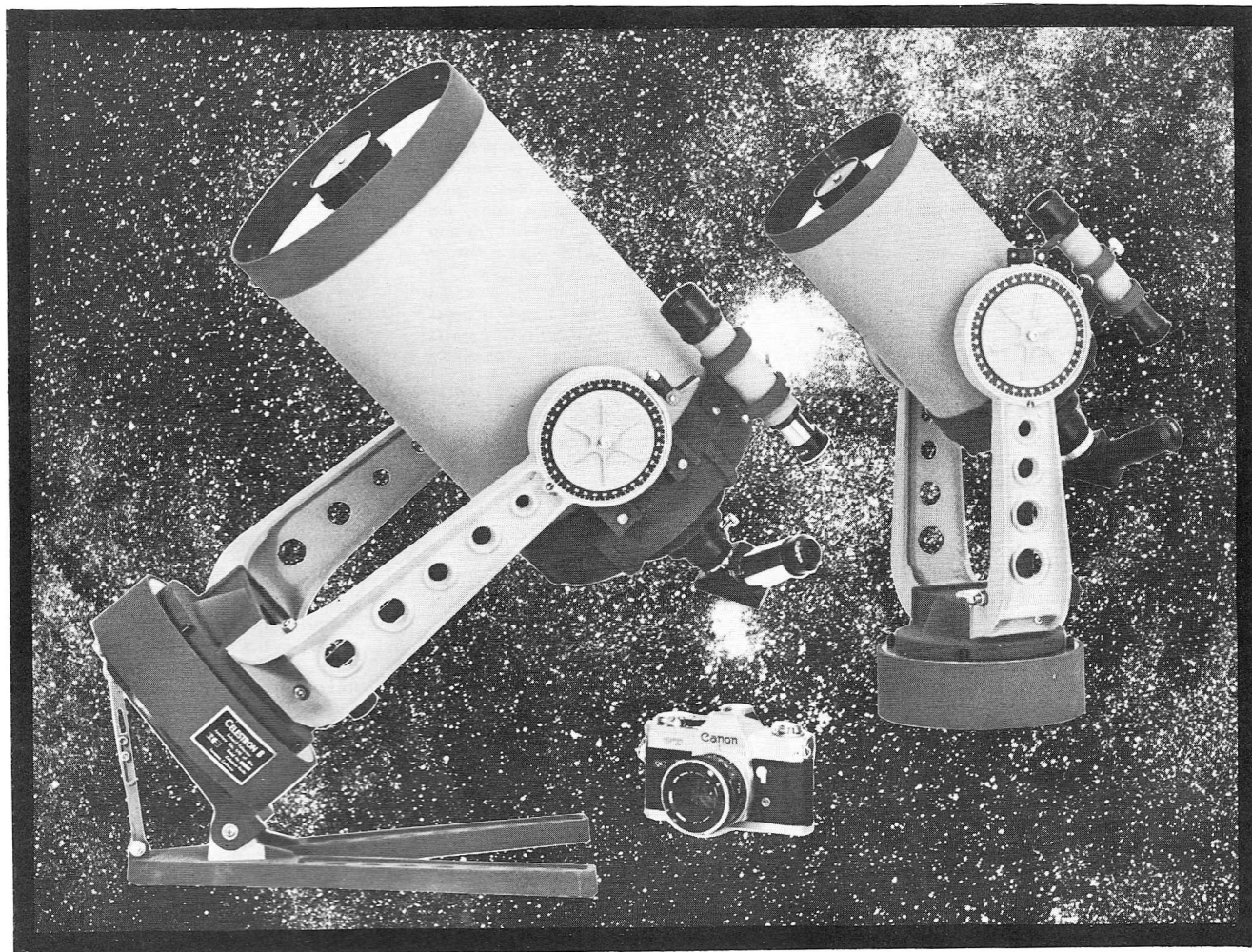


Celestron Pacific

... the world's leading manufacturer of quality Schmidt-Cassegrain telescopes presents the two most popular of its extensive line ...

the Celestron 8 and the Celestron 5

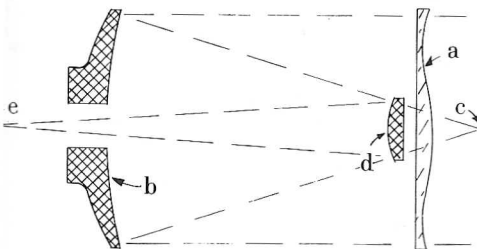


The Celestron 8 multipurpose telescope with its 8-inch clear aperture and 80-inch effective focal length causes faint celestial objects to appear 500 times brighter than to the unaided eye and it offers a resolution capability of $\frac{1}{2}$ arc second. Its useful magnification range is 50 to 500 power. The performance of a massive and highly versatile observatory telescope is packed into this compact instrument that swings down to an easily portable 9x12x22 inches and which weighs only 23 pounds. Included in this size is the sharpest available optical system for astronomical and terrestrial viewing as well as a mount and drive system engineered for the ultimate in convenience and manufactured to precision standards. The fork mount of the Celestron 8 provides excellent stability for high power viewing and for guided photographic exposures. It includes a highly accurate electric drive system which automatically tracks the stellar motion of objects being observed. Precision setting circles which assist you in dialing in the coordinates of the many fascinating deep-sky objects are standard. Educators please take note: The Celestron 8 readily lends itself to assignments such as plotting the various Apollo landing sites, timing a shadow transit across the face of Jupiter, measuring the stellar density of a Galactic Cluster, studying the spectral distribution of some of the brighter stars, making a photographic record of the phase changes of Venus, and many other such assignments even under the adverse lighting conditions of your campus. Base price \$895.00.

The recently introduced Celestron 5 scales down to five inches of clear aperture all of the fine features of the Celestron 8. It causes faint celestial objects to appear 188 times brighter than to the unaided eye and its resolution is 0.8 arc seconds. If your interest in astronomy is something less than all-encompassing, but you want the finest available multipurpose telescope to observe fine detail on the Moon, study the planets, observe brilliant galactic clusters of stars and some of the brighter nebulae; if you want a super-portable instrument to take with you on camp-outs to study a pine cone at 1000 feet, to close in whisker-to-whisker on a saucy squirrel or to capture any of these on film — then the Celestron 5 may be your telescope. This compact instrument with its 1250-mm. - f/10 mirror lens optics swings down to 6x8x16 inches and weighs only 12 pounds complete with fork mount and electric clock drive. Photographers please take note: The Celestron 5 tube assembly weighing only $3\frac{1}{2}$ pounds demounts from its fork and adapts to most 35-mm. SLR camera bodies for hand held or tripod mounted 25X telephoto shots. Your photos if shot with reasonable care through the Celestron 5 will be sharp with perfect color rendition to the corners of your 35-mm. negatives. The full price of the Celestron 5 is \$595.00 including an attractive instrument carrying case.

What other single purchase can you make that will give you the pride of ownership and the satisfaction of knowing that you have in your Celestron the ultimate in optical precision and mechanical execution? It is truly a prestigious instrument and will become a complete entertainment center for you and your friends and family. The fascinating hobby of astronomy is an outlet that can involve the bright but restless minds of your youngsters with dad in a hobby that in one encompasses the history of man and embraces the thresholds of science.

The perfectly figured Schmidt-Cassegrain lens system is capable of sharper images over a wider field than any other lens system. No other manufacturer offers a Schmidt-Cassegrain telescope of quality comparable to the Celestron.



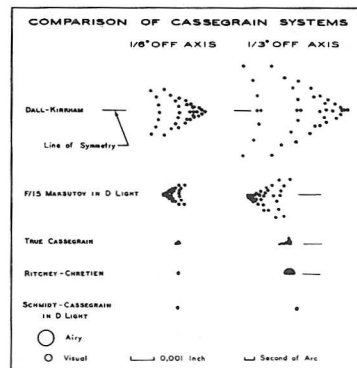
Optical diagram of the Celestron Schmidt Cassegrain lens system: The light enters the system through a thin aspheric corrector lens (a); it is then reflected by a large spherical primary mirror (b) toward the prime focus (c). The light from the primary is intercepted by the convex secondary mirror (d) and reflected back through a hole in the primary mirror to the Cassegrain focus (e). The effect of folding the optical path back with a convex secondary mirror also increases the effective focal length by a factor of three to seven times that of the primary alone.

Optical testing and Guarantee — Each of the three components in the objective system of the Celestron (primary mirror, secondary mirror, and

Schmidt corrector) are manufactured to such exacting standards that good performance could be achieved by simply randomly assembling these components into a telescope. We are not satisfied with just good performance, however. We therefore set up each of these optical systems in a laser collimator capable of detecting 1/100th wave errors. We then carefully hyperbolize the secondary mirror to bring the optical system of each Celestron to a perfect optical null. The Celestron optical guarantee is as follows: using a point source at infinity (star test) and with the system properly collimated, a knife edge shall indicate a clean optical null; when tested with a 100-line Ronchi grating with three lines intercepting the cone, the shadow bands shall appear straight. The intra and extra-focal diffraction patterns shall appear similar in regard to the central obstruction using a 12 1/2 mm ocular with the out-of-focus blur circle filling 1/3 of the field. Further, each Celestron is guaranteed to be free from defects in material and workmanship for a period of one year subject to repair or replacement at our factory.

Comparison of Cassegrain Systems

The modern computer, in ray-trace techniques, provides an excellent method for evaluating the off-axis performance of a lens system. The illustration above is from an article by James Wiley,



Sky and Telescope, April 1962. It gives the results of a computer ray trace of the several folded optical systems at 1/6° and 1/3° off axis. Each dot in the pattern is the point at the focal plane through which a given ray travels through the system will pass. The spread of these dots indicates the amount of distortion. For convenience in evaluating the distortion, the small circle in the lower left of the illustration is the size of the Airy disc for the system checked. It is evident from these ray tracings that the Celestron Schmidt-Cassegrain theoretically produces the sharpest images across the entire focal plane.

What size telescope best suits your needs? It isn't necessarily the largest and most expensive instrument that will give you the most utility and enjoyment. You must carefully evaluate your interests and balance these against your budget in selecting your telescope.

The School — One telescope is better than none. Consider the Celestron 5 or Celestron 8. The typical community college offering an astronomy observing course to a class of perhaps 30 students is best advised to install one large observatory instrument and several smaller instruments for individual student groups. An installation might include a dome mounted Celestron 16, 3 Celestron 8's, and 7 Celestron 5's.

The Serious Amateur Astronomer — Do not consider a telescope of less than 6-inch aperture. A smaller instrument limits you to observing double and variable stars, observing the planets and Moon. With the Celestron 8 and larger instruments, Globular clusters are easily resolved, planetary photography is a snap, and many of the deep-sky nebulae can be studied.

The Astrophotographer — the Celestron 8 or larger with its optional off-axis guiding system, piggy back 5 1/2" f/1.65 Schmidt camera, and piggy back mount for your 35mm camera, is the complete photographic set-up for deep sky photography. It allows you to simultaneously shoot 0.65 x 1° f/10 at the Cassegrain focus, 5 1/2 x 8° f/1.65 with the Schmidt camera, and 25 x 38° sections of the sky with the piggy-back mounted 35mm camera with a 50mm taking lens.

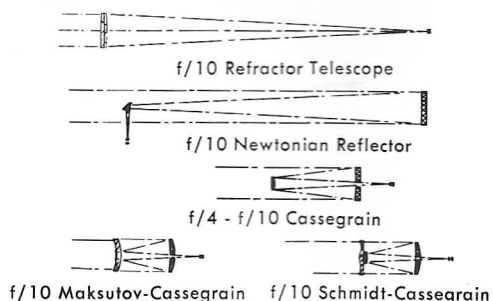
The casual telescope enthusiast — if your interest is divided between daytime viewing, nature studies, bird watching; but you want a telescope that will compete with the finest for astronomical viewing; then you may choose between the Celestron 8 or the Celestron 5.

The telephotographer — The Celestron 5 is designed as the optimum daytime viewing and telephotographers instrument. It gives excellent 25X telephoto shots and its fast f/10 speed allows you to demount it from the fork mount for hand-held action shots.

The different kinds of telescopes.

Which is best — the reflector or refractor? Is this the question that you are wrestling with in your search for a telescope that best suits your needs? Search no longer! There is an optical system available to you that combines the good features of both the reflector and refractor and eliminates all of the bad features of each. It is the Schmidt-Cassegrain

compound catadioptric. Shown below, drawn all to the same scale, are the optical diagrams of the several different telescopes offered on today's market. Each is an 8" f/10 drawn to 1/18 actual size. The refractor telescope is found principally in the small two-inch imports flooding the department stores and touted to be a 450 power instrument. Its principle advantage is in its rugged low-maintenance closed tube design and its low cost. The refractor suffers from serious color fringing and severe coma at the edges of the field. It is no longer offered in larger apertures due to the fact that it cannot compete in performance and price with modern reflector telescopes. Further, the high power claims are really just empty magnification.



The Newtonian reflector presents an excellent value for the economy seeker of large aperture. The images are free from color distortion, but suffer from off-axis coma. The long tube design requires a large and massive mount to achieve a reasonable degree of stability. The long tube Newtonian is seldom considered for a public observatory due to the danger to the observer at the top of the long tube and the fact that the delicate first surface mirrors are susceptible to contamination.

The Cassegrain reflector telescope uses a short focal length parabolic mirror in conjunction with a small hyperbolic secondary mirror. The combination gives the same performance as the long tube Newtonian but in a more compact size requiring a far less massive mount for the same degree of stability. It also places the eyepiece at a more convenient position. The disadvantages of the Cassegrain reflector telescope are the difficulty in parabolizing the short focal length primary mirror to the required degree of accuracy and the open tube construction which also exposes the mirrors to contamination. It also suffers coma to the same degree as the equivalent Newtonian.

The compound catadioptric lens system is a Cassegrain reflector which uses a spherical primary mirror and a refractive element whose sole function is to correct for spherical aberrations. The more popu-

lar of catadioptrics are the Maksutov and the Schmidt. In both systems the low-power corrector is placed at the entry aperture of the system, thereby closing the tube and protecting the first surface mirrors. As shown in the ray tracings above, the Maksutov suffers from even more severe coma than a corresponding Straight Cassegrain or Newtonian; and further, due to the thick miniscus corrector lens, it has a slight color distortion. The Schmidt-Cassegrain alone is capable of diffraction limited performance over a relatively wide flat field.

Deep Sky Photography with the Celestron 8 — by far the most rewarding photographic endeavors that the amateur astronomer can undertake are guided photographs of star clouds in the Milky Way regions, clusters of stars and nebulae surrounding groups such as the Pleiades. The photographic system to which the Celestron 8 may be expanded is the simplest but most versatile offered by any telescope manufacturer. First, using the off-axis guiding eyepiece camera adaptor, clusters and individual "Messier" objects can be shot on 35mm negs. with a camera body at the 80" Cassegrain focus. Exposures of 30 seconds will capture most of the stars in an open cluster such as the double in Perseus, while guided exposures of 5 minutes will do for the Globular cluster M13. The Great Nebula in Orion can be completely burned in by a 5-minute exposure. Simultaneously, a wide field photograph may be made of extraordinarily good quality with a camera mounted on the side of the Celestron 8 with the piggyback camera mount. The most striking photos using the Celestron 8 photographic system, having quality rivaling those of the major professional observatories, are made on 35mm negatives using the piggyback mounted Celestron 5 1/2" Schmidt Camera. It provides a 5 1/2° x 8 1/2° field with the exceptionally fast photographic speed of f/1.65.

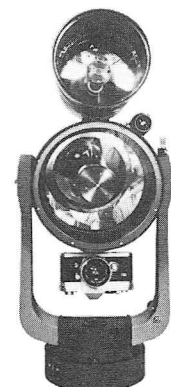


Photo down the barrel of the Celestron 8 with the 225mm - f/1.65 Schmidt Camera, and a Canon FT 50mm - f/1.8 mounted piggyback for Deep sky photography.

SPECIFICATIONS

Celestron	5	8	14	16	22
Light Grasp — compared to unaided eye	188	510	1760	2060	3900
Cassegrain Focal Length	1250mm 50"	2000mm 80"	3920mm 154"	4500mm 180"	5600mm 220"
Useful Magnification	30 to 300X	50 to 500X	50 to 850X	60 to 900X	70 to 1300X
Resolution — Theoretical limit	0.8 arc sec 197 lines/mm	0.5 arc sec 210 lines/mm	0.28 arc sec 171 lines/mm	0.25 arc sec 179 lines/mm	0.20 arc sec 200 lines/mm
Airy Disc Brilliance Factor at 160 power	4.2	27.5	256	430	2900
Faintest Stellar Magnitude	13.5	14.4	15.4	15.6	16.2
Photographic Speed	f/10	f/10	f/11	f/11	f/10
Image Scale	1.12°/inch	.72°/inch	.37°/inch	.318°/inch	.26°/inch
Field — @ 30 feet	7"	4.5"	—	—	—
35mm format 100 feet	23.5"	15.2"	—	—	—
Long Dim. 1000 feet	19.6'	12.6'	6.4'	5.5'	4.2'
Unvignetted field	1.8" circle	2.75" circle	3" circle	3.5" circle	4" circle
Near Focus	20'	25'	500'	500'	1000'
Secondary Obstruction	2"	2 3/4"	4 1/2"	5"	6 1/2"
Finder Scope	5X - 25mm	6X - 30mm	10X-40mm	10X - 40mm	10X-40mm
Eyepieces included in base price	25mm - 50X 12 1/2mm - 100X	40mm - 50X 25mm - 80X	set of 4	set of 5	set of 5
Setting Circle	R.A. Diameter	6 1/4" 4"	8" 4"	9 1/2" 6"	13" 14"
Drive Gear Dia.	4 1/2"	6"	6 3/4"	12 3/4"	12 3/4"
Clock Power 110v, 60Hz.	6 Watts	6 Watts	10 Watts	35 Watts	35 Watts
Weight	12 lbs.	23 lbs.	100 lbs.	750 lbs.	1000 lbs.
Size — swung down	7 x 8 x 16"	9 x 12 x 22"	18 x 22 x 44"	—	—
Color Scheme	Or - Brn	Or - Brn	Or - Brn	Blu - Wh	—
Shipping Weight	20 lbs.	48 lbs.	200 lbs.	1000 lbs.	1200 lbs.
Base Price	\$595.00	\$895.00	\$3600.00	\$12,900.00	\$20,000.00

Celestron 8—Base Price \$895.00
Shipping charges COD by JET Air Freight \$10 to \$50 depending on your location. Included in the base price of the Celestron 8 are all of the items listed in the specification block. You receive a complete working telescope for astronomical or terrestrial viewing. Plans are included with the Celestron 8 showing you how to make a backyard pier or wedge to tilt the instrument up to your latitude angle for astronomical viewing, or you may wish to purchase one of the optional wedge or pier assemblies shown below:

Optional Accessories

Table-Top Wedge Assembly—Cast aluminum to tilt the Celestron 8 up to your latitude angle. Adjustable from 20° to 50° \$50.00
Wedge Assembly for pipe column. Fits into top of an 8" - 1/8" wall pipe. 50.00
Additional Oculars—1 1/4" barrel Orthoscopic, 18mm - 112X; 12 1/2mm - 160X; 9mm - 222X; 6mm - 333X ea. 22.50
Prism Diagonal (if you want an extra) . . 15.00
Inconel coated Solar filters for safe viewing of the sun, 0.01% transmission.
Solar Filter—3" off axis. 75.00
Solar Filter—8" full aperture 200.00
T-Mount Camera Adaptor. 15.00
Camera Rings to couple your camera to the T-Mount adaptor—Exakta, Canon, Minolta, Nikon Pentax, Miranda, Konica—each 6.50
Tele-Extender (eyepiece projection) . . . 15.00
Off-Axis Guiding Camera Adaptor with 12 1/2mm illuminated reticle eyepiece 100.00
Illuminated Reticle Eyepiece, 12 1/2mm. . . 45.00
Piggyback Camera Mount 25.00
Counterweight Set—includes six weights. . 25.00
Enhanced coatings on reflective surfaces increases transmission by 4% 25.00
Broadband VLR coating on corrector. Increases transmission by 9 1/2% 60.00

Celestron 5 base price. \$595.00
The instrument is shipped by JET Air Freight with the shipping charges collect. (\$5 to \$25 depending on your location). The Celestron 5 supplied at the base price brings you a complete working telescope. All of the specification and accessory items listed in the specification block are included. The instrument is delivered to you in a handsome carrying case.

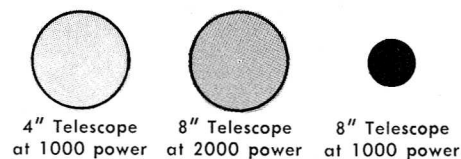
Ocular accessories for the Celestron 5 are 24 1/2mm barrel diameter—Replacement eyepieces 25mm and 12 1/2mm each 15.00
Prism Diagonal—replacement 12.50

Optional Accessories

Rigid Wedge Assembly. \$40.00
Piggyback Camera Mount. \$20.00
Barlow Lens—2X (doubles magnification) . 15.00
Porro Prism—straight through erecting system. This is the recommended erector for the
Celestron 5 20.00
Zoom erector—8 to 20mm—gives excellent eye relief for day-time viewing but slightly compromises the Celestron 5 due to the large number of elements 35.00
T-Mount Camera adaptor. 15.00
Camera rings . . . see listing under Celestron 8
Visual Back 1 1/4"—converts the Celestron 5 for use with standard 1 1/4" oculars. 15.00
Portable Pier with Wedge—8" pipe column with removable cast aluminum legs. 200.00
Counterweight set (4 weights) 20.00
Solar Filter—2" off axis 50.00
Solar Filter—5" full aperture 125.00
Enhanced coatings on reflective surfaces increase transmission by 4% 15.00
Broadband VLR coatings on corrector—increases transmission by 9.5% 35.00
Drive corrector. Operates from 12-volt battery and provides 110v, 60Hz. with fast and slow buttons for field use and guiding \$85.00

The Airy Disc Brilliance Factor.

This rating of telescopes of different aperture takes into consideration the seeing conditions which occasionally limit the magnification at which large telescopes can be used. It is based on the assumption that telescopes of different aperture but comparably good quality will be tested at the actual magnification at which they are used by observers to view objects of greatest interest. As an illustration, the Globular Cluster M13 is best viewed at about 160 power. The individual stars in this cluster are clearly resolved in an 8-inch telescope. In a 4-inch telescope, however, the whole cluster is an amorphous blob. The reason for this is as follows: If you double the aperture of a telescope, you collect 4 times as much light. In doubling the aperture, however, you concentrate the light into an Airy disc having 1/2 the diameter or 1/4 the area. In short this means that faint stellar images appear 16 times brighter if you double the aperture of a telescope at a given magnification where the Airy disc is a factor in the resolution. This, then, is the basis for comparison of telescopes of different aperture. To establish a scale, the Airy Disc Brilliance Factor of a 3 1/2"-telescope is "1". On this same scale the brilliance factor for a 5" is 4.2 and of an 8" it is 27.5.



Light distribution in the primary maxima or Airy disc of telescopes of different size compared at the same and at different magnification.

Canon FTb Camera with 50mm f/1.8 lens. 310.00
Canon FTb Camera body only with adaptors 215.00
Schmidt Camera—5 1/2" Aperture, 9" focal length. 225mm, f/1.65 with one film holder. This is complete photographic unit which is mounted piggyback on the side of any of the Celestron telescopes. You can photograph most of the Messier objects in exposures ranging from 30 seconds to 5 minutes. It uses 35mm film that you cut from standard 35mm cartridges. Image scale is 5 1/2° x 8 1/2° on the 35mm format. Schmidt Camera users must be prepared to process their own film.
Celestron Schmidt Cameras:
225mm, f/1.65 \$565.00
300mm, f/1.5 \$710.00

Celestron Telephoto Lenses

The tube assembly only of the Celestron 5 and Celestron 8 are offered separately from the fork mount for the telephotographer who desires to obtain the finest mirror-lens telephoto available but does not wish the fork mount. When sold as telephotos, these instruments are supplied with the T-Mount camera adaptor and finder scope only. They are provided with a tripod plate.
CL5-f/10—Telephoto Lens 425.00
CL8-f/10—Telephoto Lens 675.00



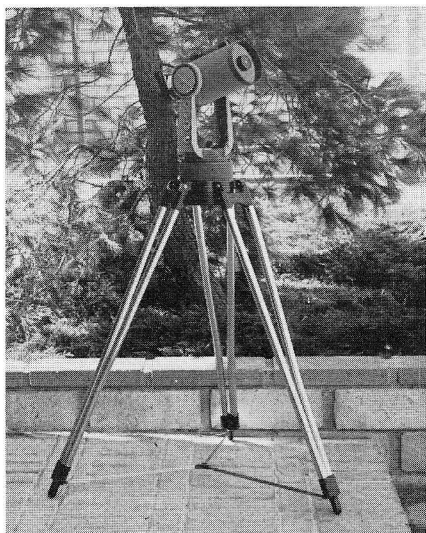
Closeup of the Celestron 8 and 5 Declination setting circle (one on each side). Photo also shows the declination clamp and the screws attaching the tube assembly to the fork.



Photo showing the Schmidt Camera film holder which holds the film at the proper curve and in turn is held in place magnetically to a rigid spider support.

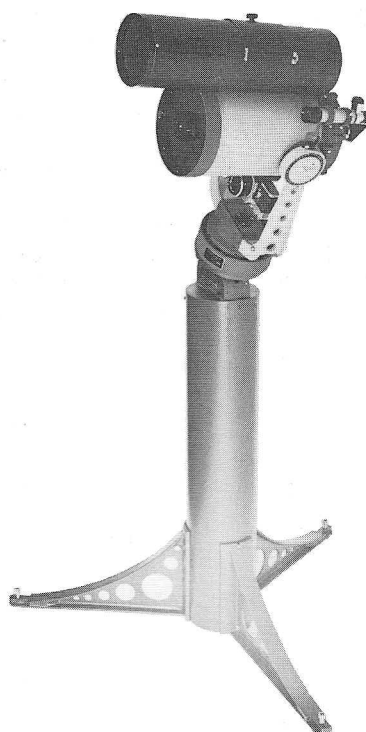
Drive Corrector. To compensate for the rotation of the Earth so that a stellar object being viewed by the Celestron remains centered in the field of view, an electric clock drive is installed in the base of the instrument. This drive is operated off 110 volts - 60 Hz, 6 watts. For operation in the field a d-c to a-c inverter called a drive corrector is offered. It consists of a solid state oscillator and amplifier device which operates from your auto battery. The main power unit of this inverter fastens to the pier of the telescope and hand controls are placed on a short extension cord which allows you to speed up to slow down the clock drive for photographic guiding. An outlet from this inverter also supplies power for the lamp in the illuminated reticle eyepiece. Price \$85.00

Special coatings — the reflective elements of the Celestron 5 and 8 are aluminized and a carefully controlled $\frac{1}{2}$ -wave overcoat of silicon monoxide is applied. This overcoat protects the delicate reflective surface and increases the reflectance by about 2% over regular telescope mirrors which are simply aluminized and flash overcoated. For those who desire, multilayer enhanced coatings are available. This further increases the reflectance by about 2% per each mirror. Due to the fact that there are only two surfaces through which light passes (the corrector plate) in the objective system and in the interest of presenting the user with a more rugged instrument, these surfaces are normally not anti-reflection coated. For those who wish the maximum transmission through their Celestron, we offer a broad-band VLR coating on the corrector. This increases the transmission by 9.5%. Users are cautioned never to leave a finger print on a coated surface, however, since the acids contained in prints tend to etch through the coatings.

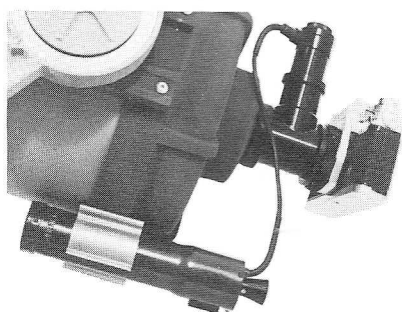


Locked-Triangle Tripod — We tested all of the heavy-duty tripods offered and found none that would meet our rigidity requirements. So we set out with the design problem of a tripod mount that would hold a high power telescope steady under gusty wind conditions, that would fold down to a convenient portable package, and that could sell for under \$200.00. All of these objectives were met in the Locked-Triangle tripod. As a matter of fact, the stability of this tripod is so good that we do not hesitate recommending it for use as a platform for either the Celestron 8 or Celestron 5 when making deep sky guided photographs. These instruments can fasten to the tripod in their altazimuth position for terrestrial viewing or for telephoto work. The tabletop wedge assemblies supplied with the Celestron 8's and 5's after the introduction of this tripod are drilled for attachment to serve as the equatorial wedge for Celestial viewing and photography.

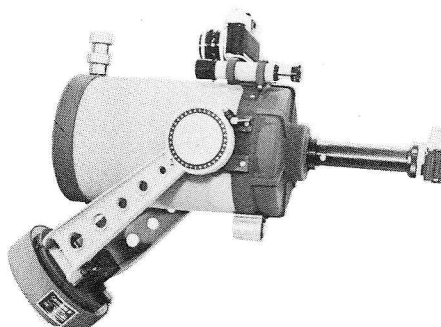
Locked-Triangle Tripod \$150.00



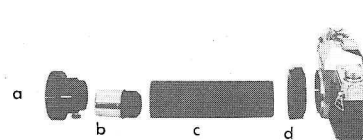
Portable pier supports the Celestron 8 with the 225mm - f/1.65 Schmidt Camera, and a piggy-back Canon FTb. The pier is an 8-inch aluminum pipe column with an adjustable wedge (20 to 50°) and rugged cast aluminum legs (total weight 48 pounds).



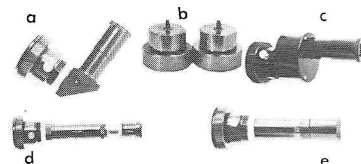
Off-axis guiding eyepiece camera adaptor mounted on the Celestron 8. This device allows you to simultaneously photograph and guide through the main optics of the Celestron 8. A small prism in this assembly picks off a star just off the edge of the field being photographed and diverts it into the $12\frac{1}{2}$ mm illuminated reticle eyepiece.



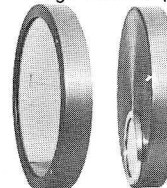
When accessories are added to the Celestron 8 or 5, particularly the tele-extender, and to assure that the clock drive performs satisfactorily, the instrument must be re-balanced. The counterweight set can stack to any required weight and screw into the holes on the front cell.



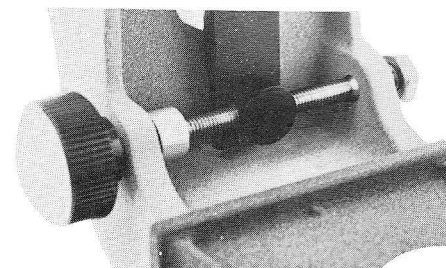
The Celestron Tele-Extender (eyepiece projection) system consists of the visual back (a) supplied with each telescope, an ocular (b) also supplied, the extender tube (c), a "T" ring (d), and the camera body. This system is most useful for close-ups of lunar craters and for planetary photography. The 25mm ocular in this system increases the focal length by a factor of 3, the $12\frac{1}{2}$ mm increases it by a factor of 8.



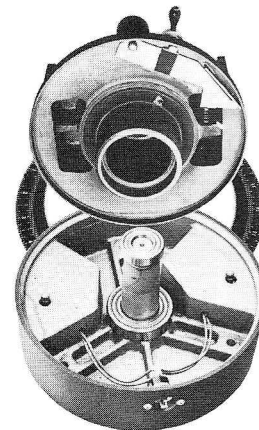
Some of the Celestron 5 accessories: (a) - prism diagonal. (b) - 2X Barlow lens. (c) - counterweight set. (d) - varipower straight-through image erector. (e) - Porro-prism image erector.



Celestron 8 Solar filters — 3-inch off-axis and full aperture. These filters consist of inconel coating applied over one surface of an optical window. They reduce the solar intensity by a factor of 1/10,000, making it completely safe to view the sun through the instrument. A similar filter is offered with the Celestron 5.



Closeup showing the declination slow motion tangent screw of the Celestron 8 (similar on the 5). This is a stainless steel roll-threaded screw for the ultimate in smoothness. The telescope moves 10 arc minutes in declination for each turn of this screw.



View inside the clock drive of the Celestron 8. Note the heavy-duty ball bearings on the long tapered polar shaft. The bearing and drive arrangement of this telescope give it load carrying capability for almost any accessory combination.

Southern Hemisphere and 50Hz operation.

Celestron customers in the Southern Hemisphere will require reverse operating drive motors and reverse reading R.A. setting circles. They may also desire 50 Hz. motors. We supply these special modifications at no added charge.

Celestron Order Form

Please enter my order for a Celestron Schmidt-Cassegrain Telescope with the accessory items indicated. My address is:

Name _____
 Street _____
 City _____
 State _____ Zip _____

Quantity	Items	Amount
	Celestron (5) (8) ()	
	Accessory items:	
California residents add 5% sales tax		
Total		

Enclosed is my deposit of \$125 (check or money order). Please notify me promptly of delivery date and approximate shipping charges. I understand that I may cancel this order at any time prior to the shipping date and my deposit would be returned in full. Delivery to be made as follows - - Check one:

- ☐ I will pick up the instrument at the Celestron factory and will make the final payment at that time.
- ☐ Please notify me when the instrument will be ready. I will submit the balance before the shipping date.
- ☐ Please ship the instrument by air freight. I will pay the balance and shipping charges C.O.D.
- ☐ I desire to finance this purchase using your factory-direct finance plan. Please send an application form.

Celestron Pacific

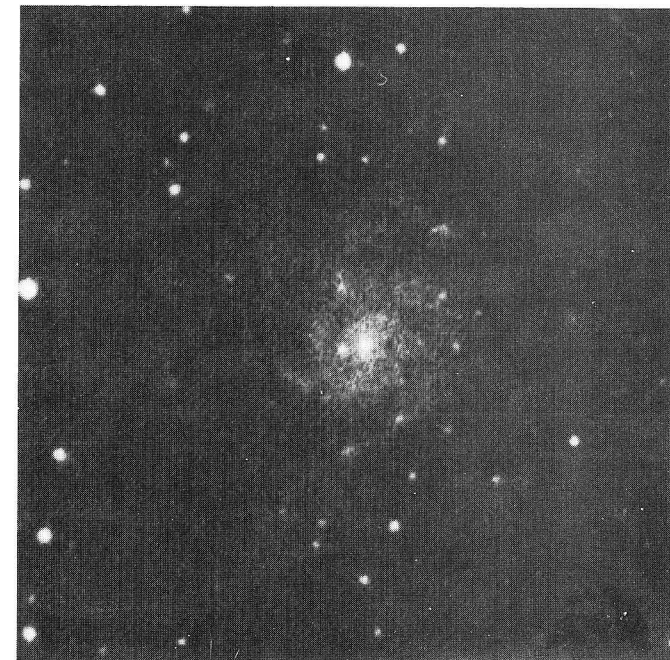
2430 Amsler / Torrance, California 90505

View of the Celestron 8 base in which the clock drive is installed. Also shown is the Right ascension clamp, the R.A. setting circle with its vernier, and the R.A. slow motion control knob. The telescope turns one hour in time about its polar axis for each turn

of the R.A. slow motion control knob. The R.A. clamp increases the drag so that the drive motors are fully engaged. The slow motion knob can override the clamp. The Celestron 5 is equipped with a similar arrangement.



M101 Spiral Galaxy in Ursa Major. 50X enlargement from a small section of a 35-mm. negative. 10-min. exposure on Plus-X. 225-mm. f/11.65 Celestron Schmidt Camera.



How to Order a Celestron Telescope

To order a Celestron Telescope simply complete the order form on the reverse side of this sheet. Your order will be promptly acknowledged, and you will be advised of the shipping date. (Depending on backlog, the shipping date will vary from stock to six weeks - seldom longer).

A factory-direct finance plan is offered for those who wish to own a Celestron telescope. For the Celestron 5 the down payment is \$200.00, and you make 12 monthly payments of \$38.00 each (this includes the \$36 interest charge and a \$25 charge for shipping and handling. For the Celestron 8 the down payment is \$345.00, and you make 12 monthly payments of \$50.00 each (this includes the \$50 interest charge). The finance plan is offered for the basic instrument only in each case - - payment for accessory items must be in full at time of delivery. Should you like to take advantage of the Celestron finance plan, simply so indicate on the reverse side of this sheet, include your deposit, and a credit application form will promptly be mailed to you. (Finance plan not available to anyone under 21 and limited to residents of continental U.S. and Canada)

Celestron Techniques — Subscription form

Enclosed is \$2.00. Please enter my subscription for the next four issues of Celestron Techniques.

Name _____

Street _____

City _____

State _____ Zip _____

Delivery information:

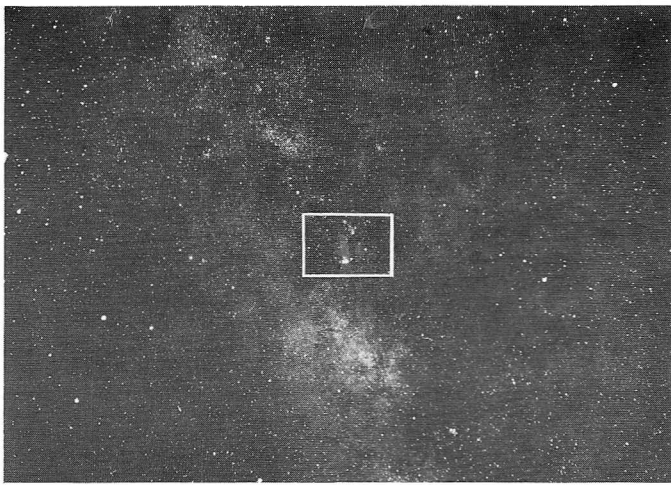
July 1, 1972

Celestron 5 — As of this date we are heavily back ordered on Celestron 5's; therefore please allow 60 to 90 days for delivery. We hope to be able to deliver from stock soon thereafter.

Celestron 8 — Four to eight weeks after receipt of order.

The North American Nebula - but with no nebulosity! Negative print made from 35mm Ektachrome X color slide. 10-minute exposure with the Celestron 225mm, f/1.65

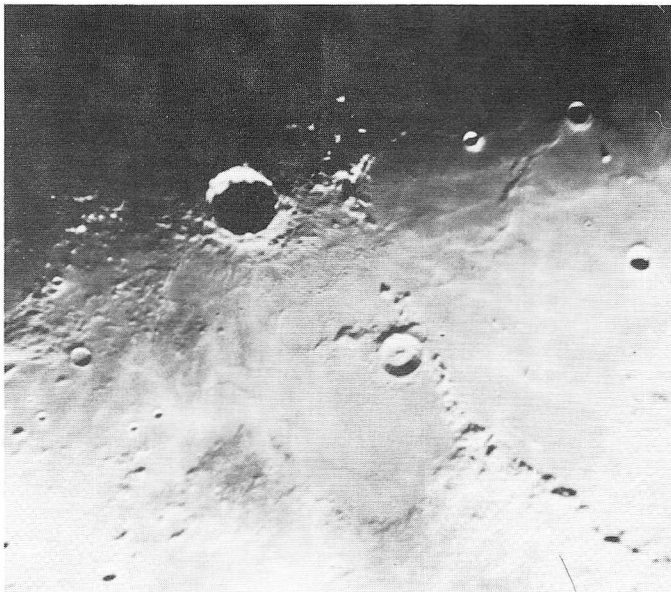
Schmidt Camera. This picture is reproduced here to show the tiny star images across the entire field of the Schmidt photographs.



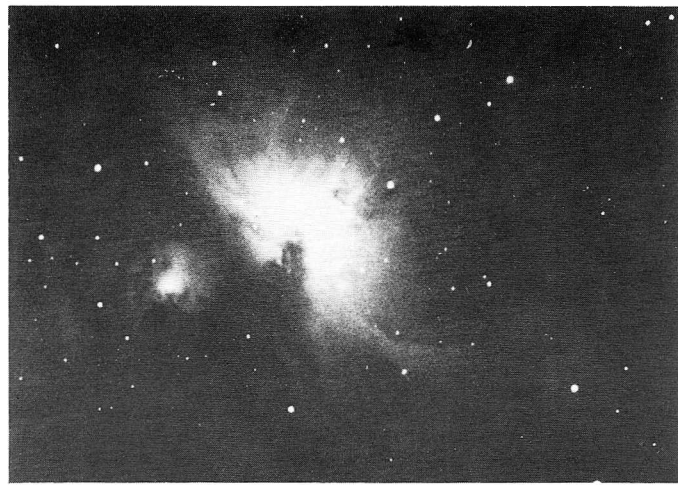
The Celestron 8 served as the stable platform for a 35mm camera with its 50mm f/2.8 taking lens for this 10-minute guided exposure of the Southern Milky Way in Sagittarius. Section outlined was simultaneously photographed by the Celestron Schmidt Camera — below.



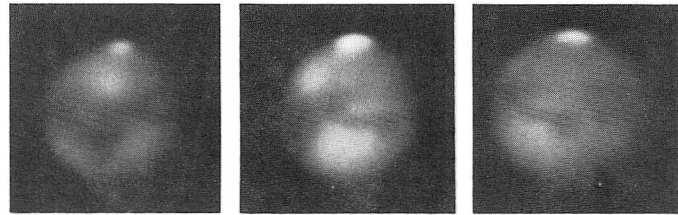
Trifid and Lagoon Nebulae (M20 and M8). Celestron 5 1/2-inch (225mm, f/1.65) Schmidt Camera photograph. This instrument was mounted piggy-back on the Celestron 8 for this 10-minute exposure on Tri-X, 8X enlargement.



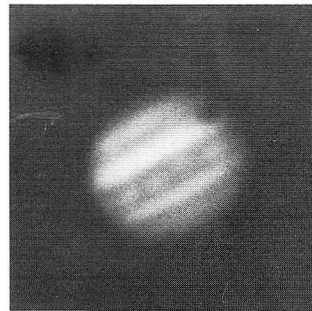
It is always a challenge to try to capture on film the enormous detail that can be seen visually through the Celestron 5 and Celestron 8. The larger crater in deep shadow is Copernicus and the somewhat smaller one is Eratosthenes. Celestron 8 photo with Tele-Extender.



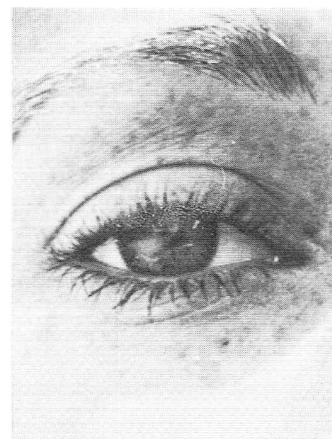
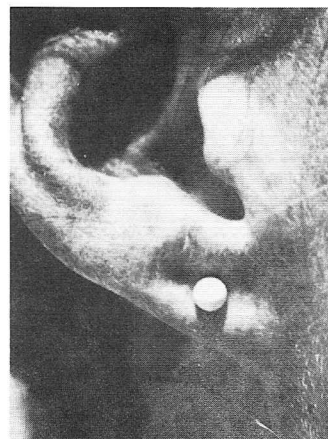
The Orion Nebula M42, the brightest nebula in the sky. It can easily be seen with the unaided eye even when the Moon is full. What appears to be the center star in the sword of Orion is actually this softly glowing cloud of ionized hydrogen. 5-minute exposure on Tri-X at the 80-inch Cassegrain focus of the Celestron 8.



Mars presents its different faces to Celestron 8 owner James Matteson of San Diego, California. Matteson took these unusual shots through his Celestron 8 on Panatomic X film using a 35mm camera body with Tele-Extender.



Jupiter with its belt structure and giant red spot is always a fascinating object for both visual and photographic work with the Celestron 8. John Sanford of Costa Mesa, Calif. took this Jupiter shot with his Celestron 8 on Tri-X film.

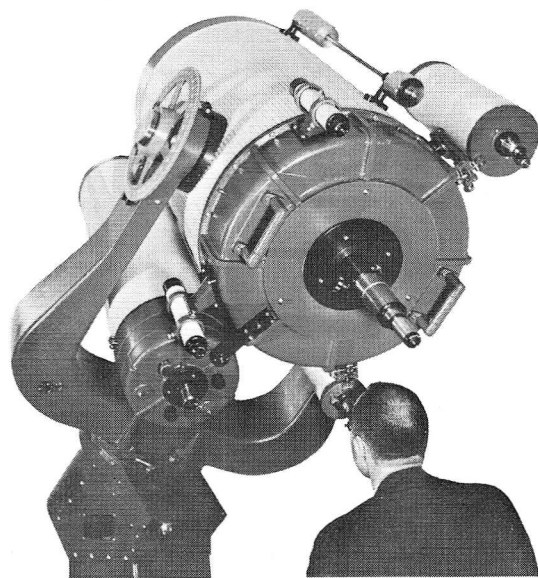


Taking pictures of pretty girls takes on a new dimension when you are shooting through the Celestron 5. Try a freckle or the twinkle in an eye or maybe the simple beauty of a pearl earring from 30 feet away.

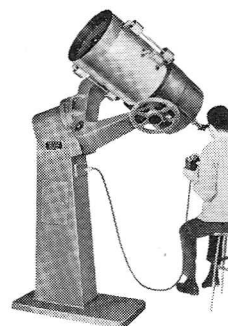
Celestron Observatory Telescopes



The Celestron 14 combines the prestigious performance of a giant-aperture observatory telescope with ready portability. This instrument has a clear diameter of 14 inches, a light grasp of 1,760 times that of the unaided eye and a useful magnification range of up to 850X. It also has a resolving power of 0.28 arc seconds, electrical slow-motions in both axes and enhanced high-transmission optics. So it is ideally suited for deep-space observations, astrophotography or research assignments, and it can be installed with pride in a permanent dome. Yet this observatory showpiece is portable. First, the Schmidt-Cassegrain optics that give razor-sharp, flattest-field images also fold a 13-foot focal length inside a stubby, 2½-foot-long tube. Second, we designed the Celestron 14 so that in minutes one person can disassemble it from its pier (optional), and carry it to a remote dark-sky site in two cases. And there the instrument can be used on a sturdy tripod with equatorial wedge (also optional), giving jitterfree image stability in the field. But the Celestron 14 offers more than the portability of optically smaller instruments; it also offers the light transmission of optically larger ones. Its optical elements, including a giant diagonal, have enhanced aluminum/silver coatings which transmit as much light to the focal plane as a conventionally coated 16-inch Cassegrain. And with optional coatings, the Celestron 14 becomes transmission-equivalent to a 17½-inch Cassegrain. Such features make this optical station ideally suited for high-contrast lunar, solar or planetary observations; for guided exposures of faint nebulae, star clusters or distant galaxies; and for photometry, spectroscopy or patrolling. And coupled with astrophotographic accessories such as the Celestron 300mm-f/1.5 Schmidt Camera, an 8-inch guide scope or a piggyback 35mm SLR camera, the Celestron 14 readily becomes an astrophotographic laboratory. The base price of the instrument... \$3600, well within the budgetary reach of small science departments, research facilities or individual amateurs.



The Celestron 22 Multipurpose Telescope for the University or Science Center installation. The 22-inch aperture causes faint stellar objects to appear over 4000 times brighter than to the unaided eye and the instrument may be used at 75 to 2000 diameter magnification. This telescope has an effective focal length of 18 feet, yet the folded optical system permits an installation in a 10-foot dome. Priced at \$20,000 to \$32,000 depending on accessories.



The Celestron 16 is the optimum primary instrument for the college or school district observatory. It features the compound Schmidt-Cassegrain optical system which allows the 15-foot focal length of the lens system to be packaged in a tube which is only 32 inches long. The massive fork and electric drive assure excellent image stability and ease of operation. The Celestron 16 causes stellar objects to appear 2000 times brighter than to the unaided eye, and it can be used at up to 1500 diameter magnification. Many optional accessories are available to expand the Celestron 16 teaching potential. The price \$13000 delivered.

Those interested in the larger Celestron telescopes — send for specific data sheets and location of the nearest public observatory where one of these instruments is installed.



Celestron Pacific

2430 Amsler Box 3578 Torrance, Calif. 90505

Phone L.A. (213) 534-2322
N.Y. (212) 834-1888
Chi. (312) 898-3353