

# **CELESTRON®**



***PRECISION OPTICS***

**• Telescopes • Binoculars •**

**• Telephoto Lenses • Spotting Scopes •**



# WHY CELESTRON?

Whether you are a sports enthusiast or a bird watcher, an experienced or beginning amateur astronomer/astrophotographer, a terrestrial photographer or a ship's captain, a target shooter or a nature viewer, Celestron believes you deserve the very best optics for your hobby, at a reasonable price.

That is why Celestron is the world leader in mirror-lens Telescopes, Spotting Scopes and Telephoto Lenses, Refractor Telescopes and Binoculars. Every optical instrument made by Celestron is hand-figured, hand-collimated and laser-tested by Celestron's experienced optical technicians. Every Celestron optical instrument will provide visual and/or photographic images of fantastic resolution, detail and brilliance.

Every instrument made by Celestron is made with your convenience and enjoyment in mind. Each one is as light, compact and portable as it can possibly be. Every one is designed to be easy to set up and easy to use. And every Celestron instrument is designed to fulfill its purpose better than any other instrument of its kind and price.

Celestron knows that today no one has money to throw away. That is why we work hard to ensure your financial investment in a Celestron product is a wise one. Celestron guarantees you'll get years of trouble

free use and enjoyment from your Celestron Telescope, Telephoto Lens, Spotting Scope or Binoculars - our products are backed by a 25-year limited warranty for parts and labor to prove it.\*

Celestron has built a world-wide dealer network to provide you with the personal service you want. Your local Celestron Dealer stocks a wide range of Celestron products, and will gladly assist you in using your Celestron. Your Dealer can help you choose the Celestron instrument and accessories that are right for you. He/she will also make sure you stay updated on the newest products and services Celestron offers.

A toll-free number is just one more of the many ways in which Celestron provides the quality customer service you can expect from the manufacturer of the world's most popular telescopes.

Celestron means quality design, innovation, craftsmanship and customer service. Celestron has been the best name in mirror-lens telescopes since we produced our first one, over twenty years ago.

There are a lot of reasons to own a Celestron. The best reason is what you can see with one. To see what a Celestron can show you, visit your local Celestron Dealer.

## NEED INFORMATION?

CALL OUR OPTICS INFORMATION SERVICE FOR DEALER  
LOCATION, TECHNICAL ASSISTANCE, PRODUCT INFORMATION  
TOLL-FREE IN THE U.S.A.

# 1-800-421-1526

*(Except Hawaii and Alaska)*

MONDAY - FRIDAY, 8 A.M. to 4 P.M. PACIFIC TIME

CALL 328-9560 IN THE 213 AREA

Celestron now has a series of Brochures, Manuals, Catalogs and free Tech Sheets available to help you identify the specific Celestron products that will fit your lifestyle. Please write us for information or instruction manuals (available for a small charge).

The 300mm f/5.6 Telephoto Manual (\$0.50)

The 500mm f/5.6 Telephoto Manual (\$1.00)

The 750/1250 Multipurpose Telephoto Manual (\$1.00)

The C90 Manual (\$1.00)

The C5/C8 Telescope Manual (\$1.00)

The C11/C14 Telescope Manual (\$1.00)

The Schmidt Camera Manual (\$1.00)

or for Tech Sheets on any of our products (No Charge — specify instrument)

We especially recommend our Accessory Manual (available for \$3.00) for those really interested in pursuing Adventure in Astronomy.

## **CELESTRON® INTERNATIONAL**

2835 COLUMBIA STREET - BOX 3578 - TORRANCE, CA 90503

ALL PHOTOGRAPHS ARE ACTUAL STANDARD CELESTRON PHOTOGRAPHS.

\*Cometron Telescopes are covered by a one-year full warranty.



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# HOW TO CHOOSE BINOCULARS

Celestron offers a wide choice of fine quality binoculars from pocket-size Mini-Binoculars to Giant astronomical Binoculars. Every one is manufactured to Celestron's high standards for precision optics and reliability.

When you choose a pair of binoculars for your own use, there are a number of factors you should consider. The most important are magnification, field of view, light collecting ability (binocular diameter and exit pupil) and portability. All these factors are related in binoculars, and each one affects the others. The larger diameter, for instance, gives you a greater light gathering power, but a larger, less portable binocular. For this reason it is important that you identify which feature or combination of features are the most important to you. Back this soul searching with a visit to your stocking Celestron Dealer so you can examine our Binoculars and select the ones just right for you.

## Binocular Identification

Binoculars are typically identified in this way:

7 X 50  
7.3°

The first number is the binocular power. The second number is the diameter (in millimeters) of the objective lens. The third number, on the second line is the size (in degrees) of the field of view.

## Magnification

The magnification of a pair of binoculars is rated in terms of the human eye. A binocular of 10 power magnifies the image ten times the size seen by a normal human eye. A binocular of 20 power magnifies the image 20 times what the human eye would normally see.

Magnification of 7 to 10 power is the best for most binocular users, (although Giant Binoculars of 11 to 30 power are fantastic for astronomy). At this magnification the binoculars will show you rich detail without sacrificing field of view, image brightness or contrast. Seven to ten power binoculars are hand-holdable. Higher power binoculars usually require a tripod for sustained use.

## Field Of View

Field of view is the size, in degrees, of the area you can see with a pair of binoculars. The larger the field of view, the larger the area that appears in the image. Wide field of view is important in situations where the object being viewed is likely to move, or when the user is moving. Therefore, binoculars with wide fields of view are especially recommended for nature watching, for viewing spectator sports, and for hiking and boating.

You can get a feel for the field of view you want by considering that the full Moon is about  $\frac{1}{2}^\circ$  across. Thus a binocular with a  $7^\circ$  field of view would let you see 14 full Moons in a row.

Field of view is related to magnification. The greater the magnification offered by a pair of binoculars (in general) the smaller the field of view. Try to find a pair of binoculars that offer both the optimum magnification you need, and the optimum field of view. All Celestron binoculars are designed to optimize both these features, and still give the sharpest possible images.

## Diameter

The diameter of the objective lens determines how much light will enter a pair of binoculars. The larger the diameter the more light the binoculars can collect and the greater the detail and clarity of the image.

Large diameter binoculars are especially important for astronomical observing and other viewing under low light conditions. We suggest at least a 40mm objective lens if you are planning frequent astronomical observing.

## Exit Pupil

Exit pupil is the size of the beam of light that leaves the eyepiece of the binoculars. The larger the exit pupil the brighter the image. Large exit pupils are advantageous when viewing in low light conditions and in situations, such as marine viewing, where the user is likely to move while viewing through the binoculars.

You may calculate the size of the exit pupil by dividing the power of the binoculars into the diameter of the objectives. A 7mm exit pupil is the largest your eye will accept. The pupil of your eye doesn't get any larger.

## Portability

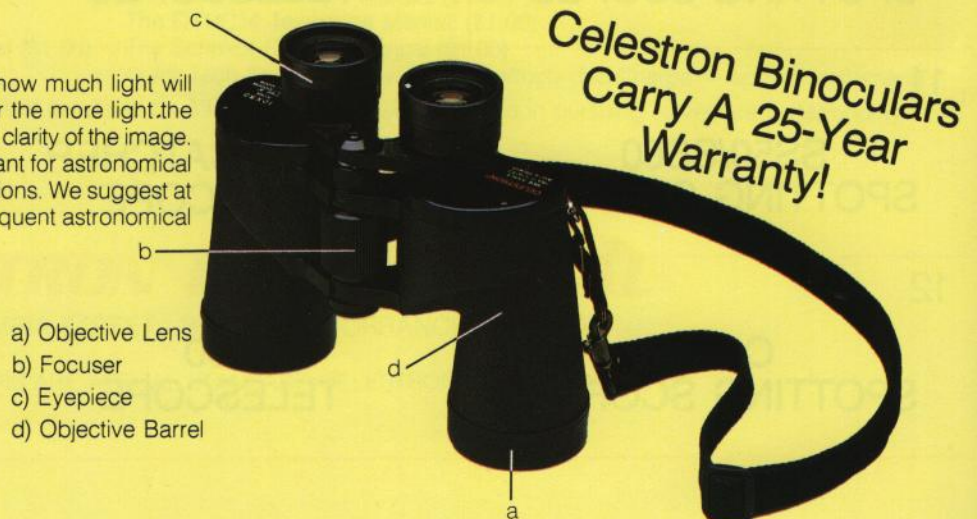
Some binoculars are so light and small that they can be stored in a pocket and hand-held indefinitely. Others, like Celestron's Giant Series can only be comfortably used on a tripod. Identify your need for portability, and for ease in hand holding versus your need for high magnification, and light collecting ability. Binoculars like Celestron's 7 X 50's and 10 x 50's in both the Classic and Nova series, offer the perfect compromise between ease-of-use, and magnification and diameter.

## Image Quality and Performance

You can expect a fantastic performance from all Celestron Binoculars, at any magnification, diameter, or field of view. Celestron precision optics provide bright, crisp, sharp images, free of color aberration and field distortion. Each pair of binoculars provides a flat field. The image is on one plane throughout the field of view, and does not curl up around the edges. Every pair of Celestron binoculars gives a clear focus. The images are sharp and clear with maximum possible sharpness at the edges. Separate focus adjustments for each eye make focusing particularly easy. Color perfect images are guaranteed in every pair of Celestron binoculars.

Celestron binoculars have a sturdy mechanical construction, and are built of the highest quality materials. Each is permanently collimated to provide you with a lifetime of pleasure and use.

Every pair of good looking, well made Celestron binoculars has something special to offer. Once you have decided what you want in a binocular your viewing adventure has just begun.





# MINI BINOCULARS

## MINI SERIES

Celestron Roof Prism Mini Binoculars are light, bright, compact, good looking binoculars at an affordable price. They are the perfect compact binocular for hikers, bird watchers, spectator sports, anytime you need a pair of small but powerful binoculars.

These lightweight binoculars (8.5 - 11 ounces) come in two sizes, 8 x 21 and 10 x 25. A rubber coated 8 x 21 version is also available. They feature multi coated lenses for maximum light transmission and the elimination of glare, ghost images, and accompanying eyestrain.

Each pair of Mini Binoculars has Celestron's laser-tested precision optics, and Celestron's famous craftsmanship to guarantee quality in every pair.

Lens Caps, fold-down rubber Eyecaps, a Neck Strap and Carrying Case are standard with every pair of Celestron Mini Binoculars.

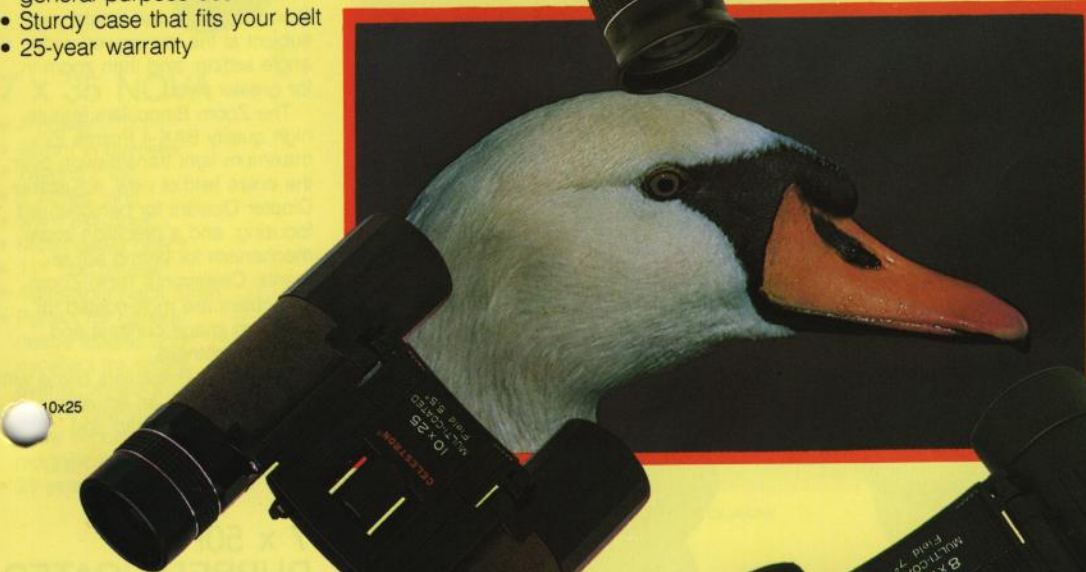
### 8 x 21 MINI

- 8 power
- 21mm in diameter
- Weighs only 8.5 oz.
- 4 inches long
- 2.6mm exit pupil
- Multi coated optics
- 7° field of view
- Designed for people who need extremely compact, rugged binoculars. They're so good, the U.S. Navy uses them!
- Best pair of Mini Binoculars for general purpose use.
- Sturdy case that fits your belt
- 25-year warranty



### 8 x 21 RUBBER COATED MINI

- 8 power
- 21mm in diameter
- Weighs 10.5 Oz.
- 4 inches long
- 2.6mm exit pupil
- Multi coated optics
- 7° field of view
- Designed for use in a rough or damp terrain
- Best pair of Mini Binoculars for camping, hunting, or boating
- Rubber coated for added shockproof strength
- Sturdy case that fits your belt
- 25-year warranty



### 10 x 25 MINI

- 10 power
- 25mm in diameter
- Weighs only 10.5 oz.
- 4-3/4 inches long
- 2.5mm exit pupil
- Multi coated optics
- 5.5° field of view
- Designed for people who need portability and high magnification
- Best pair of Mini Binoculars for high power, close range inspection
- Sturdy case that fits your belt
- 25-year warranty



For detailed information about Mini Binoculars, ask for the Mini Binocular Tech Sheet, a fact-filled brochure with detailed information on each pair of Mini Binoculars.



# CLASSICAL/ZOOM



7x35

## CLASSICAL SERIES

Celestron Classical Binoculars are the work horses in the Celestron lineup of binoculars. These classic instruments provide Celestron's top quality precision optics, engineering know-how and craftsmanship, for the best overall binoculars in this price range — anywhere. Use them for every binocular application from bird and nature watching to spectator sports.

Each of the binoculars offered in this series combines relatively high magnification with an exceptionally wide field of view. They are especially good for viewing subjects that are moving, and for hand-held use.

The precision optical system of the Classic Series uses only BAK-4 Porro Prisms to reduce light scattering and to create a round exit pupil for superior viewing results. They are UV\* coated to prevent eye fatigue and to give a sharp view, undisturbed by scattered light.

Each binocular in the Classical Series comes with an adjustable, easy-wear Neck Strap, a handsome rugged Carrying Case, Lens Caps and fold-down rubber Eyecaps.

\*Blocks harmful Ultra Violet Light.

### 7 x 35 WIDE ANGLE CLASSICAL

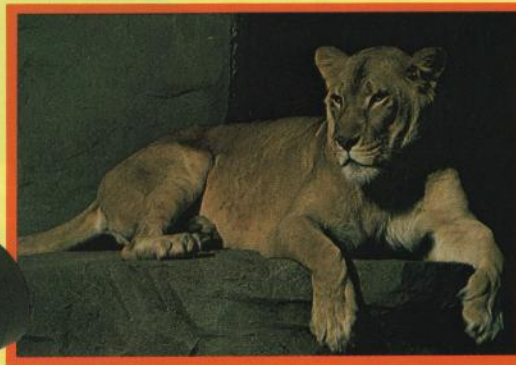
- 7 power
- 35mm in diameter
- 1 lb. 9.5 oz. in weight
- 4-3/4 inches long
- 5mm exit pupil
- 11.5° field of view
- Best specifications for an all-purpose or first binocular
- 25-year warranty.



7x50

### 7 x 50 CLASSICAL

- 7 power
- 50mm in diameter
- 2 lbs. in weight
- 6 inches long
- 7.15mm exit pupil
- 8° field of view
- Best specifications for all purpose, high light grasp binoculars
- 25-year warranty



C90 PHOTOS

### 10 x 50 CLASSICAL

- 10 power
- 50mm in diameter
- 2 lbs. 1 oz. in weight
- 6-3/4 inches long
- 5mm exit pupil
- 8° field of view
- Best specifications for wide field, high power binoculars for hand-held use.
- 25-year warranty.



10x50



7x50R

## TRIPLE ZOOM SERIES

The Celestron Triple Zoom Binoculars are the exception that proves the rule. They are a quality zoom binocular, far better, both mechanically and optically, than zoom binoculars usually offered. The effective magnification range of 7x to 21x makes these Binoculars perfect for nature and scenic viewing, and bird watching. With the Celestron Zoom Binoculars you can locate your subject at the low power, wide angle setting, and then zoom in, for greater detail.

The Zoom Binoculars feature high quality BAK-4 Prisms for maximum light transmission over the entire field of view, adjustable Diopter Oculars for personalized focusing, and a precision zoom mechanism for lasting adjustments. Celestron's Triple Zoom Binoculars are multi-coated for optimum image contrast and image brightness.

The Zoom Binoculars come with a carrying case, an adjustable easy-wear Neck Strap and Lens Caps.

### 7-21 x 50 ZOOM BINOCULARS

- 7-21 power • 50mm in diameter • Weighs only 2 lbs. 3 oz.
- 7 inches long • 7.15-2.40mm exit pupil • 4.7° field of view
- Designed for people who want an almost infinite choice of power in a binocular
- 25-year warranty

### 7 x 50R RUBBER COATED CLASSICAL

- 7 power
- 50mm in diameter
- 2 lbs. in weight
- 6-1/2 inches long
- 7.15mm exit pupil
- 7.1° field of view
- Rubber coated for added durability
- Best value for an extra rugged, high light grasp classical binocular
- 25-year warranty



ZOOM BINOCULARS

For detailed information about Celestron's Classical Series or Triple Zoom Binoculars, ask for a Tech Sheet, a fact filled brochure on the Binoculars that interest you.



# NOVA BINOCULARS

Celestron's NOVA Binoculars are a new star in the binocular universe. The NOVA Series Binoculars - Celestron's better binoculars - are perfect for every use. They provide sharper images in a flat field, for a superior viewing experience when compared to binoculars offered by other manufacturers, and to Celestron's own Classical Series.

Take them camping, hunting, bird watching, to sports events. The larger NOVA Binoculars are excellent for astronomy. Wherever you take them, they will provide non-stop viewing pleasure for every purpose.

Every NOVA Binocular is multi-coated for optimal light transmission and high contrast images free of ghosts and glare. The slotted BAK-4 Porro Prisms used in all NOVA Binoculars eliminate light scattering and produce round, well-illuminated exit pupils for excellent viewing results.

The NOVA Binoculars are carefully built of high quality materials. A center focus with right eye adjustment, allows specific focus adjustment for your eye. A full 30° of pupillary adjustment makes NOVA's comfortable for everybody.

NOVA Binoculars come with a durable, extra comfortable, adjustable Neck Strap, a Carrying Case, and Lens Caps.



7x35



8x30



7x50



CELESTRON 500MM TELEPHOTO LENS PHOTOGRAPH

## 7 x 35 NOVA

- 7 power
- 35mm in diameter
- Weighs 2 lbs.
- 5 inches long
- 5mm exit pupil
- Multi-coated optics
- 11° field of view
- Adjustable Neck Strap
- Perfect for general nature studies and excellent for sports events, where a wide field of view is more important than simple magnification.
- 25-year warranty.

## 7 x 50 NOVA

- 7 power
- 50mm in diameter
- Weighs 2lbs. 10 oz.
- 6-1/2 inches long
- 7.14 exit pupil
- Multi-coated optics
- 10° field of view
- Adjustable neck strap
- Excellent for astronomical viewing and birdwatching
- 25-year warranty

## 8 x 30 NOVA

- 8 power
- 30mm in diameter
- Weighs 1 lb.
- 5 inches long
- 3.75 mm exit pupil
- Multi-coated optics
- 8.5° field of view
- Adjustable Neck Strap
- Lighter and stronger - just the right size and power for bird watching and spectator sports
- 25-year warranty



10x50

## 10 x 50 NOVA

- 10 power
- 50mm in diameter
- Weighs 2 lbs. 8 oz.
- 6-1/2 inches long
- 5mm exit pupil
- Multi-coated optics
- 8° field of view
- Adjustable neck strap
- Designed for situations when extreme detail is needed, for astronomy and surveillance
- 25-year warranty.

For detailed information about Celestron's NOVA Binoculars, ask for a Tech Sheet, a brochure filled with details about the uses for NOVA Binoculars.



# WATERPROOF BINOCULARS

**"We call them waterproof, but don't let that fool you. They are ultra-high quality Binoculars for every purpose."**

The Waterproof Series Binoculars are Celestron's top-of-the line Binoculars, designed with your active life style in mind. Take them anywhere you go, to anything you do. Scan the ski slopes with a pair of 7 x 40 Waterproof Binoculars. Take the 8 x 30's or 10 x 40's with you boating or fishing, mountain climbing, hiking, or nature watching. Watch the final tee of a golf competition, or the winning serve of a tennis tournament with the 7 x 50's or 10 x 50's. They're also perfect for Polo, or a day at the races, and they are exceptional for bird watching.

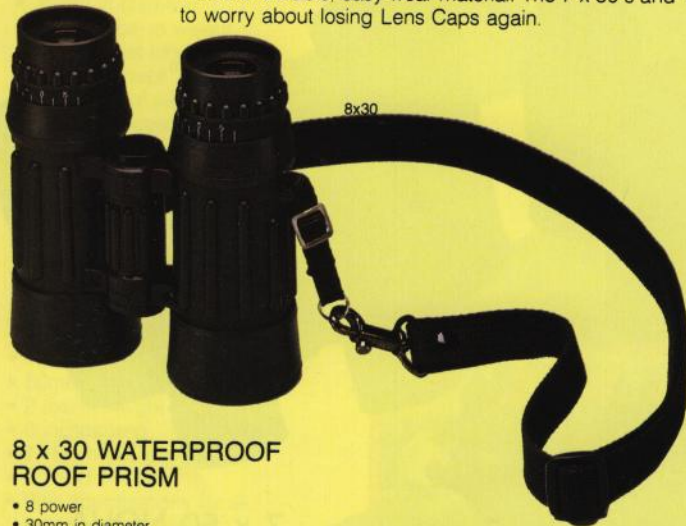
In the evening, when the days, play is over, the 7 x 50 or 10 x 50 Waterproof Binoculars are excellent for stargazing. These high performance binoculars collect so much light and provide such good image quality they can actually be used as binocular telescopes. You'll see globular star clusters and galaxies, nebulae and open star clusters, with the comfort of using both eyes.

Each pair of Celestron Waterproof Binoculars is made with the highest quality precision optics and computer optimized and laser-aided manufacture. The independent eyepiece focusing mechanism allows you extra-precise adjustment for image sharpness and clarity, and it assures you the binoculars will stay in focus as you press your eyes against them.

All lenses are multi-coated for maximum, glare-free light transmission, high image contrast and true color rendition. All binoculars in our waterproof series are nitrogen-filled to prevent oxidation and internal fogging. A specially formulated rubber coating protects the binoculars against rough handling and the everyday wear and tear of your rigorous life style.

The 8 x 30 and the 10 x 40 Binoculars are offered in a compact Roof Prism design. The 8 x 30's are also offered in a Porro Prism design similar to the other models in the series. The Waterproof 7 x 40 Binoculars are offered without the rubber coating for extreme compactness and portability.

All binoculars in the Waterproof Series include a durable Carrying Case, protective Lens Caps, and a wide adjustable Neck Strap, made of durable, easy-wear material. The 7 x 50's and 10 x 50's have flip-off Objective Lens Caps attached - You'll never have to worry about losing Lens Caps again.



## 8 x 30 WATERPROOF ROOF PRISM

- 8 power
- 30mm in diameter
- Weighs only 1 lb. 11 oz.
- 5 inches in length
- 3.8mm exit pupil
- Multi-coated optics
- 8.3° field of view
- Individual focus eyepieces
- Rubber coated for individual shockproof strength
- Designed for hikers, skiers, mountain climbers - anyone who wants extra durable extremely compact and portable binoculars.
- Best pair of medium power, Roof Prism, waterproof binoculars for use in rigorous activity, where small size is a premium.
- Easily hand held
- Roof Prism design
- 25-year warranty

## 8 x 30 WATERPROOF

- 8 power
- 30mm in diameter
- Weighs only 1 lb.
- 5 inches in length
- 3.8mm exit pupil
- Multi-coated optics
- 8.5° field of view
- Individual focus eyepieces
- Rubber coated for added shockproof strength
- Designed to provide the Porro Prism advantage in an extra durable, compact and comfortable pair of binoculars, for hikers, skiers, nature watchers.
- A popular military binocular-powerful, but rugged and lightweight
- Best pair of medium power, waterproof Porro Prism binoculars for use in rigorous activity.
- Easily hand-held
- 25-year warranty

## 7 x 40 WATERPROOF

- 7 power • 40mm in diameter • Weighs only 1 lb. 13 oz.
- 6-1/2 inches in length • 5.7mm exit pupil • Multi-coated optics
- 7.3° field of view • Individual focus eyepieces • Leather covered
- Designed for bird watchers, sporting enthusiasts, anyone who wants large light gathering power and compactness.
- Best pair of waterproof binoculars when extreme portability is called for
- Easily hand-held • 25-year warranty

## 7 x 50 WATERPROOF

- 7 power • 50mm in diameter • Weighs only 3 lb. 7 oz.
- 7 inches in length • 7.1 mm exit pupil • Multi-coated optics
- 7.3° field of view • Individual focus eyepieces
- Rubber coated for added shockproof strength
- Designed for astronomers, boaters anyone who needs large light gathering power.
- Best pair of waterproof binoculars for observing action for astronomy, for anyone who needs large light gathering power
- Easily hand-held • 25-year warranty



7x40

## 10 x 40 WATERPROOF ROOF PRISM

- 10 power
- 40mm in diameter
- Weighs only 1 lb. 1 oz.
- 6-1/2 inches in length
- 4mm exit pupil
- Multi coated precision optics
- 6.5° field of view
- Individual focus eyepieces
- Rubber coated for added shockproof strength
- Designed for boating, fishing, mountain climbing, spectator sports, birdwatching
- Best pair of all-around, Roof Prism, waterproof binoculars for terrestrial use.
- Easily hand-held
- Roof Prism for compact rugged design
- 25-year warranty

## 10 x 50 WATERPROOF

- 10 power
- 5mm in diameter
- Weighs only 3 lb. 7 oz.
- 7 inches in length
- 5.0 mm exit pupil
- Multi-coated optics
- 7° field of view
- Individual focus eyepieces
- Rubber coated for added shockproof strength
- Designed for amateur astronomers, boaters, surveillance
- Best pair of waterproof binoculars for astronomical viewing, and for terrestrial observation
- Easily hand-held
- 25-year warranty



7x50

For more information on Waterproof Binoculars, ask for a Celestron Tech Sheet. It's full of information on the binoculars, how to use them and what you can see with them.



# GIANT BINOCULARS

Giant Binoculars are Celestron's large diameter, high power binocular telescopes. They are outstanding for astronomy, long range hunting, sporting events, surveillance and for viewing in low light conditions.

These high performance binoculars will provide bright, crisp images for viewing Earthbound subjects. When turned upward, the night sky will seem to explode with deep sky objects of fantastic beauty, in a wide field of view. You'll see globular star clusters, nebulae and galaxies, all against the beckoning background of deep space. The optical quality of the Giant Series is so good you can even observe dust lanes in the Andromeda Galaxy, under a dark sky.

Binoculars in the Giant Series have a huge 80mm diameter objective lens for amazing light grasp and optimum exit pupil at high power. Celestron's Giant Binoculars are a Porro Prism design with laser-tested precision optics for exceptional image quality. They are fully anti-reflection coated (with magnesium fluoride) for glare free, ghost free viewing, without eyestrain.

Celestron recommends that the Binoculars in the Giant Series be mounted on a Tripod for prolonged periods of use. Each set of binoculars comes with a Photo Tripod Adaptor, center focus mechanism, Carrying Case, adjustable Neck Strap and Lens Caps.

## 11 x 80 COMET HUNTER GIANT BINOCULARS

- 11 power • 80mm diameter lenses
- Weighs 5 lbs. • 11-3/4 inches long
- 7.3mm exit pupil • 4.5° field of view
- Designed to provide superior light grasp, medium-high power and a wide field of view for astronomical viewing purposes
- Best pair of binoculars for astronomy under a dark sky. Especially good for viewing comets.
- 25-year warranty

25-Year  
Warranty



## 20 x 80 GIANT BINOCULARS

- 20 power
- 80mm diameter lenses
- Weighs 5 lbs.
- 11-3/4 inches long
- 4mm exit pupil
- 3.5° field of view
- Fitted for LPR filter
- Tripod recommended
- Designed for high power viewing of faint celestial objects with a fairly wide field of view
- Best pair of binoculars for city bound astronomers, and for terrestrial viewing
- 25-year warranty

## 30 x 80 GIANT BINOCULARS

- 30 power
- 80mm diameter lenses
- Weighs 5 lbs.
- 11-3/4 inches long
- 2.7mm exit pupil
- 2.0° field of view
- Not recommended for eyeglass users
- Tripod mounting is mandatory
- Designed for applications where magnification is more important than image brightness or wide field of view
- Best pair of binoculars for daytime surveillance and hunting
- 25-year warranty

For more information on Giant Series Binoculars, ask for a Celestron Tech Sheet. The Tech Sheet is full of information on Giant Binoculars, what you can see with them, and how to use them.



# HOW TO CHOOSE SPOTTING SCOPES

A spotting scope is any extremely portable, lightweight telescope that shows you a correct upright image (Most magnifying systems give a reversed, upsidedown image without the addition of a correcting prism) Spotting scopes are widely used for daytime viewing of people, places and things on Earth, when medium to high power is needed. Spotting scopes are perfect for bird watching, and nature studies, for a "50 yard line view" at the ball game, for hunting, hiking, target shooting, etc. Larger diameter spotting scopes can also be used for lunar and planetary viewing. Many spotting scopes can even be easily converted for use as a telephoto lens, so that you can photograph what you see.

Celestron offers a range of spotting scopes that combine the highest quality precision optics, and the most modern design features to give you a versatile, streamline visual instrument of incredible quality, at a very low cost.

## APERTURE AND PORTABILITY

The two most important features to consider when you choose a spotting scope are aperture and portability. In general, you will want the largest possible aperture (diameter of the light collecting lens of the scope). The greater the aperture of the spotting scope, the more light it can collect, and the more brilliance and detail in the image. Fifty to 65mm in diameter is ideal for most terrestrial (Earthbound) applications. For lunar and planetary viewing, 65-90mm of aperture is best.

The one limit to aperture is portability. The larger the aperture the larger the spotting scope, and the greater its bulk. If you plan on taking your spotting scope with you hiking, bird watching, or to any other situation where you will need to carry it for long distances a 50-65mm spotting scope provides a good balance of aperture and portability. If you intend to use your spotting scope for viewing scenery from your home, balcony or patio, then a 90mm or larger spotting scope will be fine.

Celestron offers two kinds of spotting scopes - the simple refractor scopes at smaller apertures and catadioptric scopes at larger apertures. The catadioptric designs manufactured by Celestron fold up the light to provide large aperture, and long focal length in an extremely portable package. The Celestron C90 Catadioptric Spotting Scope is especially good for terrestrial and lunar photography, as well as viewing.

Celestron Spotting Scopes are identified by their aperture. For example, the C90 Spotting Scope has an aperture of 90mm. The C65 Spotting Scope has an aperture of 65mm. You can also determine the aperture of a spotting scope by measuring the diameter of the tube (Aperture equals tube diameter).

## POWER

Power, or magnification of a spotting scope is actually a relationship between two independent optical systems - the scope itself, and the ocular (eyepiece) you are using. By exchanging an eyepiece of one focal length for another, you can increase or decrease the magnification of the spotting scope.

## FOCAL LENGTH AND FIELD OF VIEW

Focal length is the distance, in an optical system, from the lens to the point where the image is in focus (focal point). The longer the focal length of the system the larger the image.

Field of view is the size of the area you can see through the spotting scope (usually given for a point 1000 feet away or in degrees). The longer the focal length of the spotting scope the *narrower* the field of view.

When you choose a spotting scope determine the importance of both focal length *and* field of view. A spotting scope with a focal length of 300 - 800mm provides fairly high magnification in a wide field. Scopes of this focal length are perfect for viewing scenery and for viewing keeping moving objects, like race cars nearing a finish line, or inquisitive animals, in the frame.

A longer focal length scope (800-1000mm), with its narrower field of view, is ideal for bird watching, and for other situations where you may be observing small objects at a great distance.

## CELESTRON QUALITY AND VERSATILITY

All Celestron Telescopes are manufactured to the highest optical standards. Precision, laser-tested optics and quality materials are used exclusively, for consistently clear, detailed images. The good looking Celestron Spotting Scopes are rugged, versatile instruments designed to enhance your life style - inexpensively.

A complete line of photographic and visual accessories, an excellent warranty package and a world-wide Dealer Network guarantee your lasting satisfaction and pleasure.

Which Spotting Scope is right for you? Go to your Dealer and ask to see a Celestron.

	FOCAL LENGTH	FIELD OF VIEW	LIGHT GRASP (times the human eye)	PHOTOGRAPHIC USE	GENERAL PURPOSE VIEWING	NATURE VIEWING/ BIRD WATCHING	TARGET SHOOTING/ HUNTING	LUNAR VIEWING	PLANETARY VIEWING	DEEP SKY VIEWING
C90 SPOTTING SCOPE	1000mm	1.2° @ 33X	159X	X	X	X	X	X	X	X
C65 SPOTTING SCOPE	817mm	1.5° @ 33X	75X	-	X	X	X	X	X	-
SS50 SPOTTING SCOPE	380mm	2.4° @ 20X	51X	X	X	X	X	X	-	-
SS60 SPOTTING SCOPE	420mm	1.9° @ 25X	73X	X	X	X	X	X	-	-



# THE SS50 AND SS60 SPOTTING SCOPES



## SS50 SPOTTING SCOPE

- 50mm clear aperture
- 336mm of focal length
- 12 inches long
- Weighs 14 oz.
- 51 times the light gathering power of the human eye
- Designed for outdoorsmen who want a conventional, sturdy, all-metal spotting scope
- Easily converted for telephotography
- 25-year warranty

The SS50 and SS60 are conventional refractor Spotting Scopes. They are the instruments of choice for sportsmen, target shooters, marksmen and bird and nature watchers.

The excellent optical system of the SS50 and SS60 produce images of superb clarity and detail, without glare or ghost images. Their medium diameter objective lenses provide all the light gathering power you need for any outdoor activity. They are light, rugged, portable and easy to use. Mount them onto your Celestron Photographic Tripod, point and focus. Both Spotting Scopes have the option of interchangeable eyepieces for viewing at low, medium or high power. A zoom eyepiece is also available. An optional, low power Finderscope can be added to make locating objects in the Spotting Scope even easier.

The SS50 and SS60 are both photographic as well as visual instruments. Exchange the Ocular (eyepiece) and visual accessories for your SLR camera and an inexpensive T-Adapter, and you can use the SS50 or SS60 as a Telephoto Lens for nature and other telephotography.

The SS50 Spotting Scope comes with a 20 power Ocular. The SS60 comes with a 25 power Ocular. Both include Photo Tripod Adapter and Lens Cap, and all-metal construction.

CELESTRON 750MM F16 PHOTOGRAPH



## SS60 SPOTTING SCOPE

- 60mm clear aperture
- 420mm of focal length
- 12½ inches long
- Weighs 2 lbs. 8 oz.
- 73 times the light gathering power of the human eye
- Eyepiece angled 45° to the main body, ideal for target shooting
- Designed for outdoorsmen who want a conventional, all metal-spotting scope, with that extra light gathering ability
- Easily converted for telephotography
- 25-year warranty



### SUGGESTED BASIC PACKAGE

- SS50 or SS60
- Celestron Photographic Tripod

YOU CAN USE A CAMERA WITH IT!

For more information on the SS50 and SS60 ask for a Celestron Tech Sheet. The Tech Sheet is full of detailed information on the SS50 and SS60, what they can do, and how to use them.

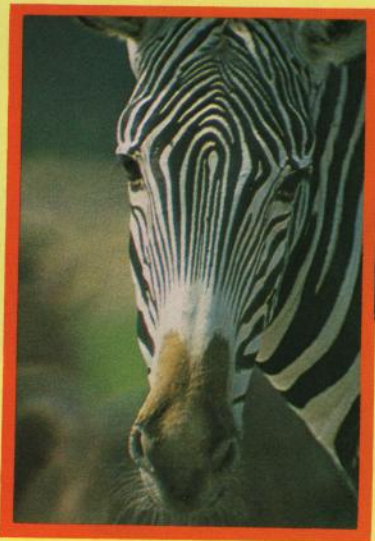


# THE C65 SPOTTING SCOPE

Celestron's New High Technology,  
Mirror Lens Spotting Scope!



Only 12 inches long!



CELESTRON 500MM TELEPHOTO PHOTOGRAPH

The C65 Spotting Scope is an exceptionally reasonably priced visual instrument for people who want to look at the world around them in great detail, and for people who want to begin their study of astronomy. It is an extremely lightweight and portable system you can take with you anywhere.

Celestron's innovative Maksutov-Gregorian optical system has virtually eliminated the problems usually associated with spotting scopes. The C65 does not need a bulky Porro Prism. The optical system itself creates an upright image. Unlike other spotting scopes the C65 (like the C90) does not suffer from color aberration, its technologically advanced mirror lens optical system produces color perfect images of impeccable quality and detail.

The C65 offers 65mm of aperture (diameter of the light collecting surface) and 817mm of focal length in a lightweight compact tube, built to withstand rugged field conditions. Set it up on a Celestron Photographic Tripod and observe close-up views of animals in their natural habitat, nesting birds, a school of whales. Take the C65 hunting or target shooting. It's the perfect spotting scope for identifying a target or finding the bulls-eye.

At night the C65 will give you incredibly bright, high contrast views of the mountains, craters and rills of the Moon and on nights of superb "seeing" you'll even be able to see the rings of Saturn. And the best thing of all about the C65 is that it's so affordable.

The C65 Spotting Scope comes standard with 25mm Kellner Ocular - .96", Photographic Tripod Adapter, Lens Cap and Lens Shade. A Deluxe Zoom Ocular is also available for variable power viewing.

- 65mm of clear aperture
- 817mm effective focal length
- 12 inches long
- Weighs 21.5 oz.
- 75 times the light gathering power of the human eye
- Designed for people who want a terrific, reasonably priced, spotting scope for close-up terrestrial views, and for lunar viewing
- 25-year warranty

## SUGGESTED BASIC PACKAGE

- C65
- Celestron Photographic Tripod

For more information on the C65 ask for Celestron's Tech Sheet. The Tech Sheet contains detailed information on the C65, what it can do, and how to use it.



# C90 SPOTTING SCOPE

## CELESTRON 90

The C90 Spotting Scope is for people who enjoy looking at (or photographing) people, places and things on Earth, but who demand precision optics, manufactured to exacting specifications. It is an easy-to-use, flexible instrument that brings laser-tested precision optics to the way you live.

The C90 Spotting Scope delivers a full 90mm (3½") of aperture for bright, distinct, detailed images in a portable, versatile, simple system. It is only 8 inches long and weighs 3½ lbs.

Attach the C90 Spotting Scope to a photographic tripod, look through, and catch the smile on a friend's face ½ mile away, watch a spider spin a web, or thrill at the detail of color on a bird's wing. Point the C90 Spotting Scope towards the sky at night and see lunar craters, the rings of Saturn, the cloud belts of Jupiter, or even galaxies and globular star clusters. Turn your C90 Spotting Scope into a camera, with simple adapters, and photograph what you see.

The C90 Spotting Scope includes a Photographic Tripod Adapter, 5 x Barlow Lens, Star Diagonal, 18mm Ocular, - .96", 30mm Ocular - .96", Lens Cap, Carrying Case and Instruction Manual. A C90 Fork Mount and Clock Drive may be added at any time, for astronomical tracking and viewing.

### C90

- 90mm clear aperture
- 1000mm effective focal length
- 8 inches long
- Weighs 3½ lbs.
- 159 times the light gathering power of your eye
- Designed for people who want portability and great image quality
- Easily converted for telephotography or astronomical viewing and photography
- Shown approximately at 1/2 lifesize
- 25-year warranty

Celestron's  
Most Popular  
Spotting Scope!



ACTUAL C90 PHOTOGRAPH

### SUGGESTED BASIC PACKAGE

- C90 Spotting Scope
- Celestron Photographic Tripod
- T-Adapter - C90
- T-Ring (Specify Camera)
- Porro Prism - .96"

For detailed information about the C90, ask for the C90 Tech Sheet, a fact filled brochure describing the C90 system in detail, what you can see, and what you can do with it.



# HOW TO CHOOSE TELEPHOTO LENSES

## CELESTRON TELEPHOTO LENSES

Celestron Telephoto Lenses bring you close optically when you can't get close physically. They shrink the distance between you and your subject, allowing you to capture close-up photographs, from almost any distance.

All Celestron Telephotos incorporate the newest designs in mirror lens technology, and the utmost in precision optics, for incredible image resolution, in an ultra-compact, lightweight, easy-to-use telephoto lens. Even the very powerful 1250mm Telephoto Lens is only 11 inches long, and weighs all of four pounds. (1250mm focal length lenses from other manufacturers may be four feet long!)

Use a Celestron Telephoto Lens to photograph birds, animals, and scenic views. Capture an important moment in a sporting event, or the shy smile on a friend's face from hundreds of feet away. With the addition of an Equatorial Mount and Clock Drive you can turn your Celestron Telephoto and SLR camera into an astrocamera, capable of producing professional quality photographs of the Moon, planets, and other Celestial objects.

Most Celestron Telephotos can be used as a visual instrument, with the addition of one or two inexpensive accessories and an eyepiece, making them the most versatile photographic lenses available. Visual images through a Celestron Telephoto are bright, and detailed, with perfect color. In the evening you can use your Celestron Telephoto to observe the neighbors in our solar system (the Moon and planets) and even deep space objects!

## IMAGE SIZE AND PORTABILITY

Two interacting factors - image magnification and portability - must be considered when choosing a telephoto lens. Magnification is determined by the focal length of the lens. (Focal length is the distance, in an optical system, from the lens to the point where the image is in focus.) Portability/ease of use is determined by the size and weight of the lens. Long focal length telephoto lenses (750mm-1250mm) are usually larger and heavier, light must travel a long distance within the optical system to reach its focal point. Most photographers require a tripod to hold them steady during exposure. Lenses of shorter focal lengths, (300mm-750mm) are lighter and more compact, and can usually be hand held by anyone. Celestron mirror lens Telephotos achieve their long focal length by folding up the light inside the tube, eliminating much of the size and weight, even in longer focal length models.

You can either look for a telephoto lens that maximizes both long focal length and ease of use, or you can determine if long focal length or ability to hand hold the lens is more important. Celestron makes a wide range of telephoto lenses to suit your specific needs. Other factors to consider when choosing a telephoto lens are field of view, aperture and f/ratio.

## FOCAL LENGTH AND FIELD OF VIEW

The focal length of a lens determines the size of the image you see in the camera - the magnification. Celestron Telephoto Lenses achieve their long focal lengths through a system of folded optics. Light is folded up and magnified several times within the optical tube.

The accompanying photographs show a comparison of lenses of different focal lengths. You may notice, at longer focal lengths you get higher magnification in a fairly wide-field. When you choose your Celestron Telephoto Lens, keep in mind that a 300-750mm lens will give a relatively high magnification in a fairly wide-field. Lenses in these focal lengths are terrific for photographing scenic views, sporting events and for use in situations where you want to isolate a subject, but still keep a sense of the background.

Longer focal length lenses (750-2000mm) are ideal for nature photography, for wildlife and birds, for candid photography, for astrophotography, and for any other situation where you want to focus on a distant subject, in great detail.

## APERTURE AND F/STOP NUMBER

Aperture is the diameter of the light collecting surface of the lens. The larger the aperture the more light collected, and the brighter and more detailed the photographic image the lens can provide.

The f/stop of a telephoto lens is the ratio of the focal length of the lens to its aperture (diameter of light collecting surface). An f/stop of f/4 for instance, means the aperture of the lens is 1/4 of the focal length of the lens. The larger the ratio of the aperture to the focal length, the smaller the f/stop number. Lenses with small f/stop numbers react to light faster than lenses with larger f/stop numbers. So the smaller the f/stop number the shorter your exposure time. The f/ratio of all Celestron Telephoto Lenses is fixed. To use them vary the shutter speed on your manual or aperture priority SLR cameras. Lenses with smaller f/stop numbers, such as the Celestron 750mm, f/6 are perfect for photographic work under low light conditions.

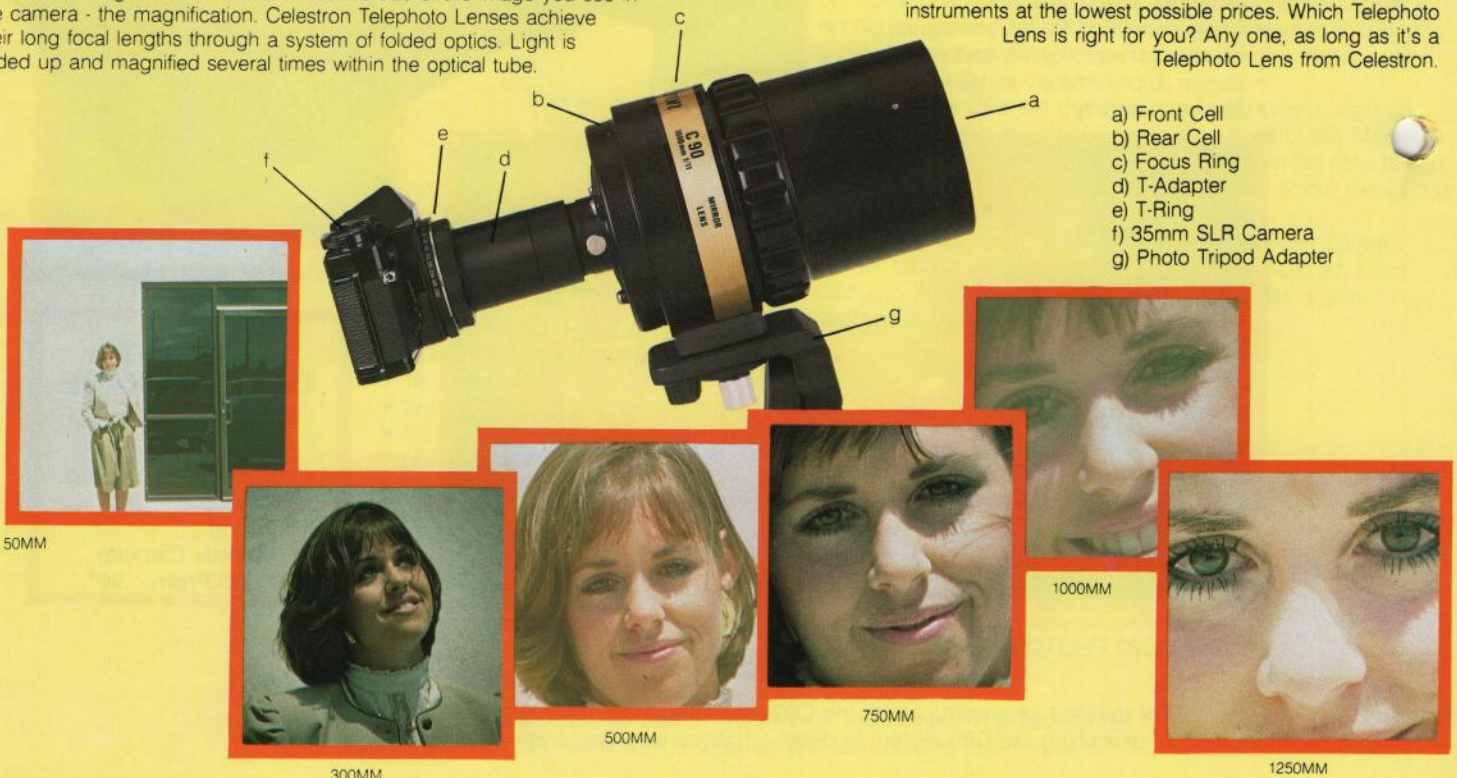
## PHOTOGRAPHIC AND VISUAL ACCESSORIES

Celestron offers a complete line of visual and photographic accessories to enhance your photographic experience. Filters for both black and white, and color photography, Tele-Converters, Car Window Mounts, Table Top Mounts and Photographic Tripods are all available from Celestron.

A large selection of Oculars (eyepieces) and other visual accessories will provide you with hours of viewing (in addition to photographic) pleasure from your Celestron Telephoto Lens. Simply remove the T-Adapter, screw in a Visual Back, drop in an Ocular and you are ready to observe.

## CELESTRON QUALITY

The name Celestron has come to mean quality precision optics, in Telescopes, Binoculars, Spotting Scopes and Telephoto Lenses. Celestron uses the most modern fabrication and testing methods to build you the highest quality optical instruments at the lowest possible prices. Which Telephoto Lens is right for you? Any one, as long as it's a Telephoto Lens from Celestron.





# 300/500mm TELEPHOTOS

## 300mm

- 65mm clear aperture • 300mm effective focal length
- f/5.6 photographic speed • 2.56 inches long
- Weighs 9 oz.
- Designed for people who want an extremely compact, lightweight, easy to hand hold telephoto lens to shrink the distance between themselves and their subject.
- Attaches to any SLR camera body with an inexpensive T-Ring
- 25-year warranty



CELESTRON 300MM PHOTO

## 300mm

**"Get close optically when it is impossible to get close physically"**

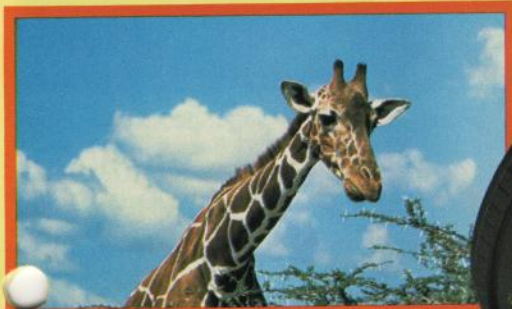
The 300mm is Celestron's smallest Telephoto Lens. It offers precision optics in a rapid-focus, catadioptric system, that is extremely portable and easy-to-use. Celestron anti-reflection coats the 300mm focal length, f/5.6 lens for maximum light transmission and high contrast images.

The Celestron 300 instantly shrinks the distance between you and your subject by a factor of 6 (when compared to a normal 50mm lens). Take it with you anywhere - it's small enough to fit in your pocket. Snap it onto your SLR camera to photograph scenic vistas, birds, wildlife, people and their activities... all from afar.

This handsome, inexpensively priced lens comes standard with a sturdy Carrying Case with strap, Lens Caps, and a Neutral Density (ND2) Filter. A Lens Shade, Tele-Converter, and a complete set of filters are available as accessories.

### SUGGESTED BASIC PACKAGE

- Celestron 300mm or 500mm Telephoto Lens
- Celestron Photographic Tripod
- T-Ring (specify camera)
- Tele-Converter



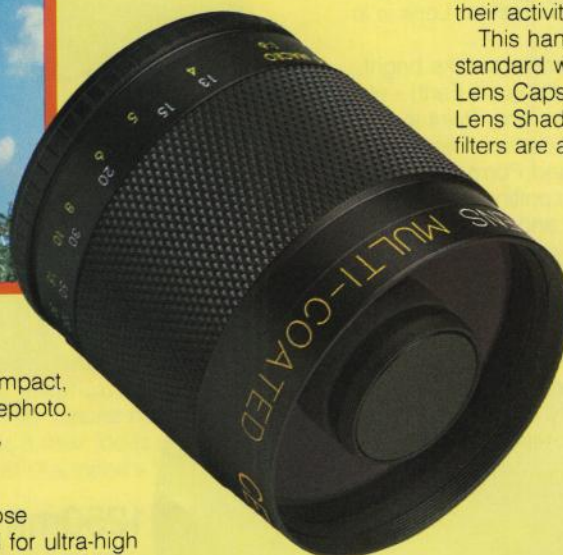
CELESTRON 500MM PHOTO

## 500mm

The Celestron 500mm Lens is an ultra-compact, lightweight, diffraction-limited mirror lens Telephoto. Its a 500mm focal length, f/8 optical system, built with Celestron's renown laser-tested precision optics. It will produce fantastically sharp photographic images that surpass those offered by others. Its optics are multi-coated for ultra-high light transmission, true color reproduction and ultra-high contrast.

The Celestron 500 is designed for active people. Snap it onto your SLR camera and take hand held shots of sports events, family gatherings... any dynamic situation. Attach the Celestron 500 Lens and your camera to a Tripod, for photographic nature studies or candid portraiture. The Celestron 500 does it all.

The 500 is equipped with Lens Caps, a sturdy Carrying Case, and Skylight Filter. A Tele-Converter and other accessories are available.



## 500mm

- 72mm of clear aperture
- 500mm effective focal length
- f/8 photographic speed
- 3½ inches long • Weighs 14 oz.
- Accepts standard 72mm filters
- Designed for photographers who want a fairly fast, long focal length system in an extremely compact lightweight lens
- Attaches to your SLR camera with an inexpensive T-Ring
- 25-year warranty

For more information on Celestron Telephoto Lenses ask for the Celestron Tech Sheets, informative brochures full of details on Celestron Telephoto Lenses and how to use them.



# 750/1250mm TELEPHOTO LENSES

## 750mm

The Celestron 750mm Lens is a superb diffraction-limited Schmidt-Cassegrain Telephoto for photographic and visual use. It provides 750mm of focal length, and 5 inches of light collecting aperture in an extremely fast (f/6), lightweight precision optical system. It is light enough and photographically fast enough for hand-held use - but we do suggest a Tripod for best results.

Attach the 750 to your SLR camera. Your subject will be magnified 15 times that of a normal 50mm lens - for terrific close-up views of the world around you. (The long focal length 750 gives you even larger images than the 500mm lens, at a photographic speed faster than all but Celestron's 300mm lens, for extremely short exposure times, even under low light conditions). Hand hold the Lens for action photography, or use a tripod for nature studies and scenery. Exchange your camera for visual accessories (an Ocular, Visual Back and Porro Prism) and the Celestron 750 becomes an excellent spotting scope for terrestrial viewing. The 5 inch aperture can even collect enough light to give bright detailed views of the Moon and planets of our solar system. It's especially dramatic when viewing deep space objects with a low power wide angle eyepiece.\*

The Celestron 750 Telephoto Lens comes equipped with Lens Caps, rugged Carrying Case, Photo Tripod Adapter, T-Adapter, and a huge assortment of accessories.

750 PHOTO



## 750mm

- 125mm clear aperture
- 750mm effective focal length
- f/6 photographic speed
- 10 inches long
- Weighs 4 lbs.
- Designed to deliver a lot of focal length at an extremely fast photographic speed
- Hand-figured optics
- Special coatings available
- Attaches to your SLR camera body with a T-Ring
- 25 year warranty

## 1250mm

The Celestron 1250 is a long focal length, diffraction-limited Telephoto Lens of exceptional quality. Built with Celestron's on-going commitment to precision optics this f/10, 1250mm focal length, 5-inch aperture Schmidt-Cassegrain Telephoto Lens is in a class by itself.

Use the Celestron 1250 and your SLR camera to take bright, detailed, high resolution photographs of anything on Earth - at 25 times the magnification of a normal 50mm lens. Point the 1250 at the night sky and photograph lunar craters. Replace your camera with a Visual Back, eyepiece and Porro Prism and the 1250 becomes an ultra-sharp terrestrial spotting scope. Exchange the Porro Prism for a Star Diagonal and you have an astronomical telescope capable of detailed views of the rings of Saturn, or celestial objects far beyond the solar system. With the Celestron 1250, terrific photographs are just the beginning!

The Celestron 1250 comes standard with Lens Caps, Carrying Case, Photo Tripod Adapter, T-Adapter and instructions. All you need is an inexpensive T-Ring to adapt your camera to our lens.



1250 PHOTO



## 1250mm

- 125mm clear aperture
- 1250mm effective focal length
- f/10 photographic speed
- 11 inches long
- Weighs 4 lbs.
- Designed for committed terrestrial photographers, who need the reach of a super long telephoto
- Hand-figured optics
- Special coatings available
- Attaches to your SLR camera body with a T-Ring
- 25-year warranty

### SUGGESTED BASIC PACKAGE

- Celestron 750mm or 1250mm Telephoto Lens
- Celestron Photographic Tripod
- T-Ring (Specify camera)
- Visual Back - 1-1/4"
- Porro Prism - 1-1/4"
- 17mm Plössl Ocular - 1-1/4" for the 750mm
- 26mm Plössl Ocular - 1-1/4" for the 1250mm

\*Use a 17mm Ocular - 1 1/4" for daytime use, and a 17mm, 26mm Plössl, or any of Celestron's quality Erfle Oculars for nighttime viewing.

For more information on Celestron Telephoto Lenses ask for a Celestron Tech Sheet, an informative brochure on Celestron Telephoto Lenses, and how to use them.



# 1000mm (C90) TELEPHOTO



C90 PHOTO

## 1000mm

The Celestron C90 Telephoto Lens is a precision optics, Maksutov-Cassegrain Telephoto Lens. Like the C90 Astro Telescope and the C90 Spotting Scope, the C90 Telephoto lens is an exciting, portable, versatile, high performance, photographic and visual instrument.

The C90 Telephoto Lens offers 1000mm of focal length in a 3 lb., 8 inch long, f/11 optical system. Its mirror lens optics enable it to magnify images 20 times greater than a 50mm lens, and still be light and compact enough to hand hold.

Active photographers will love what the C90 Telephoto can do. You'll be able to photograph birds and wildlife in their natural habitat, or a spider web glistening with dew, (the C90 has a near focus of 7 feet). You can make a detailed photographic portrait of a friend's face from dozens of feet away.

Replace your camera with a Porro Prism or Star Diagonal and an eyepiece\* and you can use the C90 Telephoto lens as a spotting scope for terrestrial viewing, or as an astronomical telescope.

The C90 Telephoto (but not the C90 Astro, or Spotting Scope) is finished in black to match your camera equipment. It comes standard with Lens Caps, a sturdy Carrying Case, Photo Tripod Adapter and instructions.

\*Celestron recommends a 25mm Ocular - .96" for daytime use.

## SUGGESTED BASIC PACKAGE

- C90 Telephoto
- Celestron Photographic Tripod
- T-Ring (Specify camera)
- 25mm Ocular - .96"
- Porro Prism - .96"

## 1000mm

- 90mm clear aperture
- 1000mm effective focal length
- f/11 photographic speed
- 8 inches long
- Weighs 3 lbs.
- Ultra-sturdy - able to be used in the field
- Designed for people who really want to have fun with serious terrestrial photography, and for visual use
- Hand-figured optics
- Attaches to your SLR camera body with a T-Ring
- 25-year warranty

For more information on the C90 1000mm Telephoto Lens ask for a Celestron Tech Sheet, an informative brochure filled with information on the 1000mm Telephoto Lens.



# HOW TO CHOOSE TELESCOPES

One of the most important decisions an amateur astronomer can make is in his/her choice of a telescope. Every telescope has different qualities to offer and every astronomer has different needs.

Getting you together with the right telescope is easy once you have identified what you want from a telescope and learned some simple principles and information to help guide your choice.

Begin by assessing your own needs and experience. What do you want to see with your telescope? Will you often transport it to different locations or will you keep it in one viewing place most of the time? Are you a beginner or do you already have a lot of experience? Are you a casual observer or are you interested in more serious study? How deep is your interest in astronomy? Will you go out observing every weekend or will you take your telescope out once a month or so? Whatever your answer to these questions - there is a telescope that is just right for you.

There are three types of telescopes available on the market today. They are the refractor (lens type), the reflector (mirror type) and the catadioptric (compound lens/mirror) system. All have the same basic function, to obtain a sharp, clear image by collecting rays of light and bringing them to a point of focus, but each system does it differently.

Refractor telescopes, with their impressive long tubes fit the mental image most people have of telescopes. They have one main optical element, called an Objective Lens, permanently mounted and aligned at the front of the telescope tube. An eyepiece is inserted at the opposite end of the telescope. Light entering a refracting telescope is bent by the objective lens to meet at a focal point (point of focus). The image at the focal point is enlarged by the eyepiece - the magnifying lens of the telescope. Celestron's Refracting Telescopes are shown on pg. 20. Our Cometron Telescopes on pg. 30 are budget priced refractors for youngsters as well as ideal for high power terrestrial viewing.




A simple REFLECTOR telescope consists of an open tube with a curved mirror, called the primary mirror, at the bottom. Light enters the open end of the tube and strikes the primary mirror where it is bent to meet at a point and is then reflected onto a second mirror, called a flat or diagonal. The light from the diagonal mirror is directed out an opening on the side of the tube where an eyepiece magnifies the image for observation.

CATADIOPTRIC REFLECTOR telescopes combine design elements of both refractor and reflector telescopes. Celestron, a pioneer in catadioptric telescopes, began producing them over 20 years ago. Light enters a Celestron Catadioptric Telescope through a lens called a corrector plate. The light then strikes the "primary" mirror (spherical in shape) at the bottom of the telescope and is reflected back up the tube of the telescope. The light is then intercepted by a smaller "secondary" mirror mounted on the back of the corrector plate. The secondary mirror reflects the light

out an opening in the rear cell or, in the case of our Comet Catcher, out the side of the telescope. The image (of the object you are looking at) is formed outside the telescope and magnified by the eyepiece for your inspection. Replace the eyepiece with a camera, and you can use a Celestron as a powerful telephoto lens.

The catadioptric telescope is exceptionally compact because its optics provide all the power of a long focal length (the basic measure of magnification in an optical system) optical instrument compressed into a compact tube, both easy to carry and easy to use. Catadioptric telescopes have revolutionized amateur astronomy in the last decade. They are ultra-compact and those offered by Celestron have exceptional image quality. Before these user friendly, portable telescopes were readily available the most common amateur telescope was a six-inch diameter (aperture) reflector - about the limit for easy transport. But since the advent of Celestron's innovative manufacturing technology the eight-inch diameter (aperture) C8 Catadioptric Telescope has become the standard size common among stargazers. In fact, the C8 is the most popular modern telescope in the world today.

All three types of telescopes have certain strengths and weaknesses. The chart below sums these up. Remember though, the most important consideration for any telescope is that it offer quality optics, made of the best materials, and that it be manufactured to exacting standards, like all telescopes offered by Celestron.

				
		REFRACTOR	REFLECTOR	CATADIOPTRIC
STRENGTHS		<ul style="list-style-type: none"> <li>• High contrast images</li> <li>• Excellent for lunar, planetary, double star and terrestrial viewing - especially in larger diameter versions</li> <li>• simple to use</li> <li>• Good color correction in achromatic and fluorite designs (such as Celestron refractors)</li> <li>• Little/no maintenance necessary</li> </ul>	<ul style="list-style-type: none"> <li>• Good images from medium through large diameter versions</li> <li>• Perfect color images</li> <li>• Less expensive than equivalent sized refractors</li> </ul>	<ul style="list-style-type: none"> <li>• Extremely compact, easy to use</li> <li>• Excellent images</li> <li>• Extremely lightweight, portable, easy to handle</li> <li>• Inexpensive compared to refractor of equal diameter</li> <li>• Perfect color images</li> <li>• Closed tube</li> <li>• Little/no maintenance necessary</li> <li>• Easy astrophotography techniques</li> <li>• Compact enough for terrestrial use</li> <li>• Excellent all-purpose telescope.</li> </ul>
	WEAKNESSES	<ul style="list-style-type: none"> <li>• Large diameter refractors are extremely large, heavy and bulky</li> <li>• May suffer from color aberration (imperfect color)</li> <li>• More difficult to use photographically unless special design considerations are made</li> <li>• Poor reputation due to low quality, imported toy telescopes</li> <li>• Very expensive in larger sizes</li> </ul>	<ul style="list-style-type: none"> <li>• The open tube exposes optical elements to air and dirt</li> <li>• Air currents in the tube can affect image quality</li> <li>• Require a lot of maintenance</li> <li>• Large diameter reflectors are expensive</li> <li>• Difficult to use for long exposure, astrophotography. Usually requires expensive accessories.</li> <li>• Large diameter reflectors are very large and heavy</li> </ul>	<ul style="list-style-type: none"> <li>• Do not look like long white skinny telescopes people expect a telescope to look like</li> </ul>



## Diameter

The main purpose of a telescope is to collect light. The more light a telescope collects the more detail and clarity of the image you can see or photograph. Larger diameter telescopes collect more light. If you double the aperture (diameter) of a telescope you double its resolving power, and boost its light gathering ability by four.

A globular star cluster such as M13 is nearly unresolved through a 4-inch diameter telescope at 150 power. With an 8-inch telescope at the same power the cluster is sixteen times more brilliant, stars are separated into distinct points, and the cluster itself is resolved to the core.

A very good rule of thumb to observe then, when looking for a telescope, is to choose one that has a large diameter. Whether you are a beginner, or an experienced amateur, a casual observer or a serious student of astronomy: Choose the largest diameter telescope you can find that is portable enough for you to use easily, and that fits within your price range.

If you must choose between a refractor, reflector and catadioptric telescope choose the one with the largest diameter. The telescope with the largest diameter (as long as its well made) will always out perform telescopes of smaller diameter, no matter what the design.

If you do not know the aperture of a telescope, measure the diameter of the tube opening. The diameter of a telescope is equal to its aperture. Celestron telescopes are designated by their aperture. A C90, for example, has a 90mm aperture, a C8 has an eight-inch aperture and the C14 has a fourteen-inch aperture.

## Power

Telescopes are not rated by their power. A telescope can be any power you want it to be. You can even change the power of your telescope to meet specific viewing needs and viewing conditions.

Telescope power, (magnification) depends on two separate factors: The focal length of the telescope and the focal length of the eyepiece (also called Ocular). Focal length is the distance light travels through a lens system, to the point of focus. Change the eyepiece to one of another focal length, and you change the power of the whole system (the telescope). To determine power of any telescope divide the focal length of the telescope by the focal length of the eyepiece. Put a 20mm eyepiece into the C8 (2000mm focal length) for observing deep space objects at 100 power. Put a 10mm eyepiece in the C8 for planet watching at 200 power, or zoom in on a crater of the Moon with a 5mm eyepiece for 400 power. There are many types of eyepieces. The Celestron "Plössl" Oculars are top-of-the-line eyepieces that provide maximum sharpness and image contrast.

Theoretically you can increase magnification infinitely. In real life image quality drops off when magnification is too high. In general you can increase power up to 60 times the diameter of the telescope. The effective power limit of the C8, for instance, is 480 power.

It is usually better to determine which eyepiece to use, based on what you are observing, (under specific conditions), rather than by power. Celestron Manuals and Tech Sheets for specific telescopes all offer charts that show which eyepiece is best for particular observing functions.

## Portability

Next to diameter, portability is probably the most important feature to consider when choosing a telescope. You will probably want to take your telescope out to a rural area where you can observe under dark skies, (although you can see a lot in the city). If your telescope is compact, light weight and easily manageable

by one person, a field trip to a dark viewing spot is a simple matter. If your telescope is large and bulky such a trip can be difficult. Even the largest Celestron Catadioptric telescope, the C14 can be easily handled by one person, and transported in a compact car.

If you are planning to transport your telescope to different viewing locations, whether every weekend, or once a month then portability is important. A Schmidt-Cassegrain, or Maksutov-Cassegrain catadioptric telescope is probably a better investment of your telescope dollar than a large refractor. However some specialized refractors, like the Celestron C70 Flourite are designed for portability. If you intend to keep your telescope primarily in one viewing location most of the time a refractor telescope might be as attractive as a catadioptric telescope.

## Versatility

Look for a telescope that can grow along with you as your experience and interest expand. Make sure the manufacturer has a complete line of accessories so that your telescope and your fun are not limited by lack of equipment.

Celestron Telescopes are all made to accept a large assortment of Oculars for different viewing needs and conditions. Photography through your Celestron Telescope can be lots of fun. Every Celestron is designed to fit onto your camera, with a simple adapter. In addition, other accessories to enhance your viewing and photographing enjoyment are readily available from Celestron Dealers.

## Sturdy Mount

A telescope is only as good as its mounting. A telescope mount has two functions. One is to provide a system for smooth controlled movement to point and guide the telescope. The second function is to hold the telescope stationary so that you can view and photograph objects without having the image disturbed by the movement of the Earth.

There are two types of mounts available - the Alt-azimuth Mount and the Equatorial Mount.

The Alt-azimuth Mount has two motions, up and down, or altitude, and side-to-side, or azimuth. Thus the name alt-azimuth. A telescope in an Alt-azimuth Mount is in a yoke or fork, that moves around a central pivot (see the C100 on pg. 20 as an example). A good Alt-azimuth Mount will have locks for both up and down and side-to-side movement. These Mounts are exceptionally good for terrestrial viewing, and for scanning the sky at low power.

Equatorial Mounts are superior for astronomical observing over long periods of time, and are absolutely necessary for astrophotography. As the Earth rotates around its axis the stationary stars appear to move across the sky. If you are observing them in your telescope they will float out of view. A telescope on an Equatorial Mount can be turned toward a celestial object, and guided either by manual Slow Motion Controls or by an electric Clock Drive on the Equatorial Mount, so that it follows the object across the sky and keeps it in view of the telescope. The C90 Astro, C5, C8, C11 and C14 all have an electric Clock Drive as a standard feature.

Celestron offers two types of Equatorial Mount: the "Fork" Mount on the C90 Astro, C5, C8, C11 and C14, and the "German" Equatorial Mount on the C60 and C80 as examples.

In addition to the mount itself a Tripod or Pier is necessary to support the telescope. The Tripod or Pier must be rigid, and vibration free. It is also helpful if they are lightweight, and easy to handle and set up. Celestron offers adjustable height Tripods for most of its Telescopes.

## Quality/Service

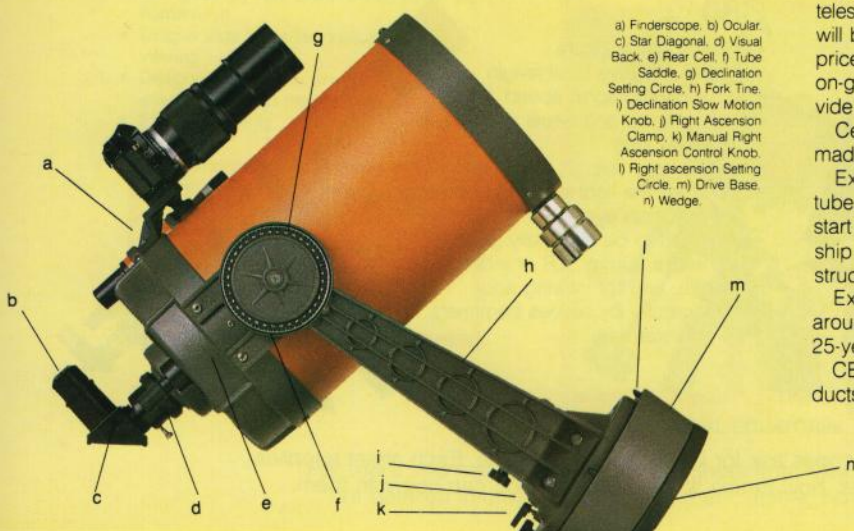
Celestron has been the leading manufacturer of top quality, affordable telescopes since we put our first telescope on the market. It has been, and always will be our philosophy to offer the public top quality products and reasonable prices. We have maintained our lead by a constant surveillance over quality, an on-going commitment to innovative design and technique, and a promise to provide the best to our customers.

Celestron believes that excellence starts with precision optics. Our lenses are made from the finest optical glass, hand-figured, laser-tested and hand-collimated.

Excellence is found in the top quality materials Celestron uses for our telescope tube assemblies - materials that reach thermal equilibrium rapidly, so you can start observing right away. Excellence is found in the materials and craftsmanship of our Clock Drives and Equatorial Mounts. It's found in the sturdy construction and functional design of our accessories.

Excellence continues in our international distribution network, with dealers all around the world, in our toll-free information number, and in our Telescope's 25-year limited warranty for parts and services.

CELESTRON. The name means the best in telescopes. We offer quality products, good service and reasonable prices. You can count on it.





# REFRACTOR TELESCOPES

## CELESTRON 60

The Celestron C60 is a lightweight, portable refractor telescope for active, on-the-go people. Take it with you camping, hunting... anywhere you go. It will even look great permanently mounted in your home or office, where you have a view a telescope will help you enjoy. Use the C60 to observe and photograph the Moon and planets, or people, places and things on Earth. Explore the brighter deep sky objects, such as the Orion Nebula, and view objects from the "Messier Catalog" from a dark sky site.

The C60 is small compared to our other telescopes, but its high quality optics provide images of clarity and brilliance.\* Celestron uses only the highest quality optical glass and coatings in the C60, for optimum color rendition and high contrast. The 60mm aperture, 910mm focal length C60 comes standard with a 25mm Kellner Ocular - 1-1/4" for a wide field of view, and a 6mm Orthoscopic Ocular - 1-1/4" for high power. An Equatorial Mount with Setting Circles and optional Quartz Motor Drive, adjustable wooden Tripod, Sunglass, Accessory Case, Leveling Bubble and Lens Cap are included in the base price. A huge assortment of accessories, including photographic adapters are available.

*\*The C60 is a classic first telescope that will show you many of the beautiful objects in our universe. It is not a toy. If you have a stronger desire to observe and photograph deep sky objects, and your budget allows, we suggest the C8 Telescope.*

### C60

- 60mm clear aperture
- 910mm effective focal length
- f/15 photographic speed
- Multipurpose - visual and photographic capabilities
- 36 inches long
- 33 lbs. Tripod included
- Slow Motion Controls standard
- 73 times the light collecting power of the human eye
- Designed for portability and image quality, a good first telescope
- 25-year warranty



## CELESTRON 100

The Celestron C100 is the finest alt-azimuth mount refractor telescope available. Use it to watch Venus go through phases, to explore the surface of the Moon, the polar caps of Mars, the rings of Saturn and the clouds of Jupiter. Explore deep space objects and split double stars. Use it to look at people, places and things here on Earth.

The 100mm full aperture, and 1-1/4" oculars of the C100 (Celestron's largest refractor) provide extra-wide, bright, sharp, high contrast images. The precision optics of this 1300mm focal length, fully baffled telescope are diffraction-limited: Image quality is limited only by the physical characteristics of light transmission through the Earth's atmosphere - not by the telescope's optics.

Oversize Lock Knobs on the Alt-azimuth Yoke Mount, for easy locking on target, sturdy wooden Tripod, 25mm Kellner Ocular - 1-1/4", 6mm Orthoscopic Ocular - 1-1/4", Accessory Case, and Lens Cap, are standard.

*\*An Equatorial version, the C100E is also available with a white tube with a 1500mm focal length lens.*

### C100

- 102mm (4-inch) clear aperture
- 1300mm effective focal length
- f/12.7 photographic speed
- Photographic and visual capabilities
- Over four feet long
- 38.5 lbs.
- 212 times the light gathering power of the human eye
- Designed to provide compelling, detailed high contrast images for serious planetary viewing, for terrestrial observing, and for "splitting" double stars
- 25-year warranty



## CELESTRON 70 FLUORITE\*

The Celestron C70 is a lightweight refractor telescope of impeccable quality - designed for the perfectionist. Use it to observe or photograph the craters of the Moon, the rings of Saturn, the clouds and moons of Jupiter, Star Clusters and Nebulae in the Summer Milky Way, or the delicate markings on a bird.

A special Objective Lens element constructed of calcium fluorite enables the C70 to deliver images that are bright, sharp and color perfect, even when observing low contrast objects. This superbly crafted, fast (f/8), 560mm focal length telescope is diffraction-limited - the limits to what you can see are determined by the nature of light transmission through the Earth's atmosphere - not by the precision optics of the Telescope.

The C70 Fluorite is fitted for 1-1/4" Oculars. A huge assortment of accessories, including an Equatorial Mount with Quartz Clock Drive are available.

### C70

- 70mm clear aperture
- 560mm effective focal length
- f/8 photographic speed
- Photographic and visual capabilities
- 24 inches long
- Weighs 4 lbs.
- 100 times the light gathering power of the human eye
- Designed for the person who demands the best image he/she can get

*\* Tube only*

55mm and 80mm versions are available on special order.



## CELESTRON 80

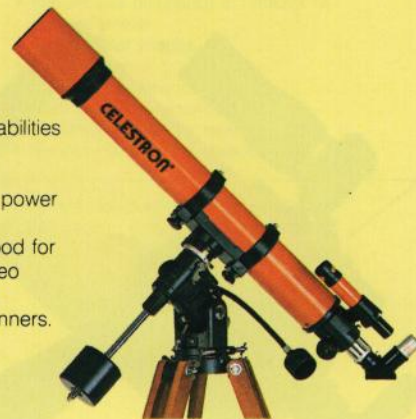
The Celestron C80 is a top-of-the-line diffraction-limited, equatorially mounted, refracting telescope. Use it to inspect and photograph the Moon and planets of our solar system, turn it towards the bounty of deep space, or observe a sailboat far out at sea. Anything in the Universe is yours with a Celestron.

The C80 offers a f/11.4, 910mm focal length, fully baffled optical system, in a handsome, easy-to-use Telescope. The optical glass of the 80mm Objective Lens is carefully chosen and then figured to optimum levels of precision - for color perfect, crisp, sharp, high contrast images. Fully coated 1-1/4" oculars are supplied for extra brightness and wide field of view.

A German Equatorial Mount with Setting Circles, Slow Motion Controls and optional Quartz Drive Corrector, adjustable wooden Tripod, 25mm Kellner Ocular - 1-1/4", 6mm Orthoscopic Ocular - 1-1/4", Sun Filter, Bubble Level and Accessory Case are standard.

### C80

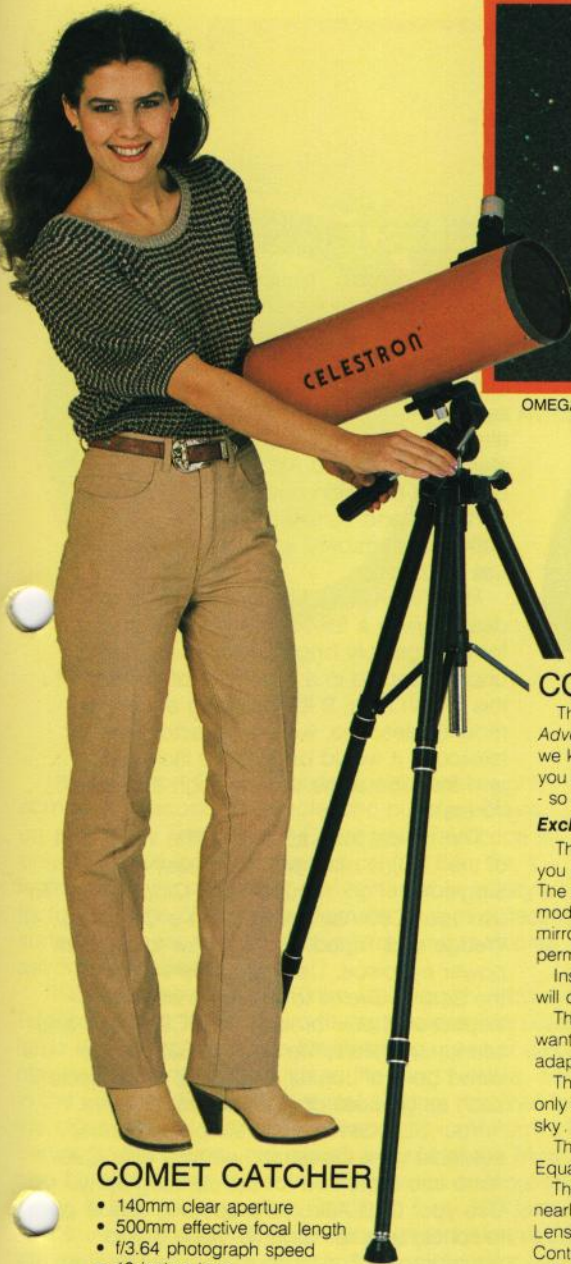
- 80mm clear aperture
- 910mm effective focal length
- f/11.4 photographic speed
- Photographic and visual capabilities
- 39 inches long
- Weighs 35.6 lbs.
- 130 times the light gathering power of the human eye
- Designed to be especially good for use with a 35mm SLR or video camera, and for viewing and photography by serious beginners.
- 25-year warranty



For more information on Refractor Telescopes ask for Celestron Tech sheets. Each sheet supplies detailed information on the telescopes, how to use them, and what you can see with them.



# CELESTRON'S COMET CATCHER

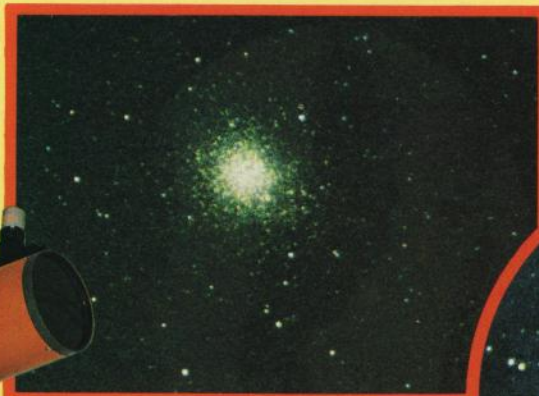


## COMET CATCHER

- 140mm clear aperture
- 500mm effective focal length
- f/3.64 photograph speed
- 19 inches long
- Weighs 6.4 lbs.
- Schmidt-Newtonian optical system
- 330 times the light gathering power of the human eye
- Unique slide focus for photography or viewing
- Designed for people who want brilliant images in a large field of view
- 25-year warranty

## BASIC PACKAGE

- Comet Catcher
- Celestron Photographic Tripod
- 26mm Plössl Ocular - 1 1/4"
- Deluxe Barlow Lens - 1 1/4"



OMEGA CENTURI



THE ORION NEBULA

ACTUAL COMET CATCHER PHOTOGRAPHS

## COMET CATCHER

The Celestron Comet Catcher is a new kind of Telescope. Exclusively manufactured by Celestron, it will show you an *Adventure in Astronomy*. Celestron studied what people want when they're looking at our Universe. From our research, we know you need a telescope with: (1) a wide field of view — so you can easily find objects, (2) Precision Optics - so you won't be disappointed in what you see, (3) a large diameter mirror - so the images are bright and detailed, (4) portability - so you can use it anytime, anywhere. The Celestron Comet Catcher delivers all this... and more.

### Exclusive Schmidt-Newtonian Optics Means Extra-Sharp Brilliant Images

The Celestron Comet Catcher, and only the Comet Catcher, uses modern state-of-the-art aspheric optics to give you images sharper than ever possible in a wide field telescope. The secret is the corrector lens mounted in front. The aspheric corrector is laser-tested to incredible accuracy by Celestron's experienced opticians, using the most modern testing devices available. Celestron's Comet Catcher uses only quality optical glass. The spherical primary mirror is properly supported and is of the proper thickness (1:6 thickness to diameter) to ensure quality images and permanent optical alignment.

Instead of the dim, unsharp images delivered by small beginner's telescopes, the precision optics of the Celestron will open the Universe to you with crisp, bright detailed views.

The Comet Catcher is easy to use. Attach it to a photographic tripod. Point it in the direction of the object you want to look at. Look through the eyepiece, focus and slowly scan the sky until the object is in view. Use simple adapters to attach your SLR camera to the Comet Catcher and photograph what you see.

The Comet Catcher gives you portability you never thought was possible in a large diameter telescope. It weighs only 6.4 lbs. and is only 20 inches long. Take it anywhere you go, to observe objects on the ground and in the sky... the Moon, planets, star clusters, nebulae, galaxies, and, of course, comets.

The Comet Catcher comes with an 18mm - 1 1/4" Ocular, Lens Cap, Photo Tripod Adapter, (The optional Comet Catcher Equatorial Mount is necessary for time exposures.)

The Celestron Comet Catcher is backed by a huge assortment of accessories that will allow you to undertake nearly any astronomical project. Accessories include: Oculars for higher or lower power, camera adapters, Barlow Lenses (magnification boosters), Eyepiece Filters, a German Equatorial Mount with Setting Circles and Slow Motion Controls, and much more.

The optional Comet Catcher Equatorial Mount is a super sturdy mount that is also used on our C125 and C6 Newtonian Telescopes. The mount has as standard features: Adjustable Height Tripod, Setting Circles, Slow-Motion Controls, Azimuth and Elevation Fine Adjustments, Accessory Tray, Bubble Level. Optional accessories include

Quartz Pulse Motor, Polar Axis Finder and more. With the Comet Catcher and the Comet Catcher Equatorial Mount you will have a complete equatorially mounted telescope.

What do you need an Equatorial Mount for? The Equatorial Mount will allow you to track an object by only one smooth movement in the east-west (Right Ascension) direction - absolutely essential if you plan astrophotography of deep sky objects. The setting circles on the optional Equatorial Mount will let you locate an unfamiliar astronomical object by coordinates ("R.A." and "Dec.") rather than by star-hopping with the Sky Map. But don't think that every beginner *must* have the Equatorial Mount, the Comet Catcher (with an 18 to 26mm ocular) gives a very wide field of view — so, locating objects with the Celestron Sky Maps is easy with some practice. Celestron also encourages beginners to start their *Adventure in Astronomy* by looking, because the Universe is full of incredibly beautiful objects to look at and the Comet Catcher is the perfect telescope to unveil the Universe!



OPTIONAL EQUATORIAL MOUNT

For more information ask for a Tech Sheet from Celestron. Our Comet Catcher Tech Sheet is full of detailed information on the Comet Catcher, how to use it and what you can see with it.



# THE C90 ASTRO TELESCOPE

ACTUAL C90 PHOTOGRAPHS



## C90

- 90mm clear aperture
- 1000mm effective focal length
- f/11 photographic speed
- 8-inches long
- Weighs 9 lbs.
- 159 times the light gathering power of the human eye
- Designed to be the perfect ultra-portable compact telescope for beginning astronomers, or anyone who finds portability to be a premium.
- Rugged, Single Arm Fork Mount (Trademark #1,204,142) and Table Top Tripod included
- 25-year warranty

## BASIC C90 ASTRO PACKAGE

- C90 Astro Telescope
- Equatorial Wedge — C90
- Adjustable Tripod 5/8/90
- T-Adapter — C90
- T-Ring (Specify camera)
- Celestron Star Maps

## CELESTRON 90

The C90 Astro Telescope is Celestron's superb complete Astronomical Telescope for beginning astronomers who want maximum portability. It includes a Clock Drive, Table Top Tripod, Setting Circles and quality eyepieces, all in a laser-tested permanently aligned and collimated unit. Built to exacting standards, the C90 Astro's computer-designed precision optical system offers portability and versatility, and great light gathering capability, in a compact, easy-to-use Telescope.

The C90 Astro's Maksutov-Cassegrain design gives a full 90mm (3½") of aperture for unforgettably bright, detailed images, unprecedented in a telescope of this size. If this 8 inch long, 9 lb. (including equatorial mount) telescope, were a refractor type telescope it would be over 40 inches long and the tube alone would weigh at least 35 lbs!

The optical tube assembly (the visual part of the C90) is mounted in an easy-to-use Single Arm Fork Mount™ and Clock Drive. To use your C90 Astro attach it to a Celestron Wedge and Tripod. Slip in a low to medium power eyepiece. Use the Finderscope or the Setting Circles to locate an object for inspection. Look through your C90 Astro and see lunar craters, the rings of Saturn, the cloud belts of Jupiter, and deep sky objects such as galaxies or globular star clusters.

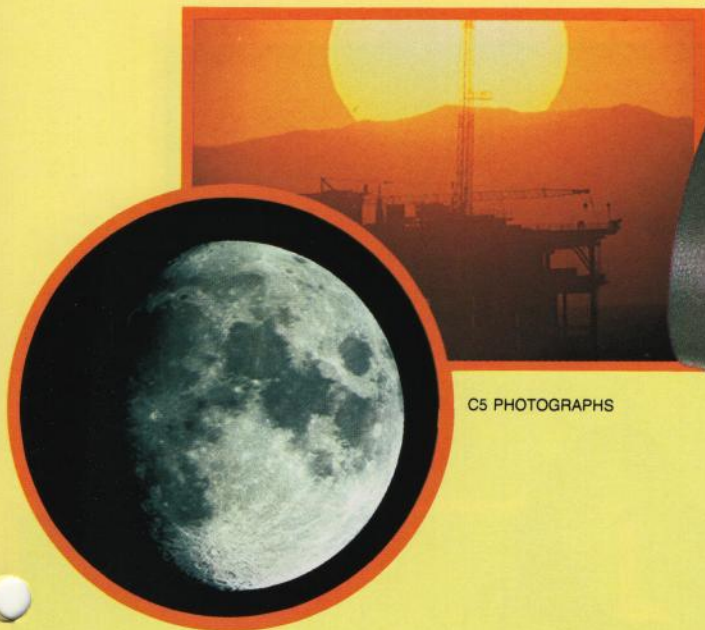
Your SLR camera and simple adapters, available from Celestron, will turn your C90 Astro into a camera for astrophotography. Use your C90 Astro as a spotting scope or telephoto lens for daytime viewing and photography. For those more interested in terrestrial observing and photography, Celestron offers the C90 Spotting Scope (no Fork Arms or Clock Drive) and the C90 Telephoto (the visual/photographic part of the telescope).

The C90 Astro comes equipped with a Sturdy Swing-Through Fork Mount,™ Setting Circles, manual Slow Motion Controls, and an Electric Clock Drive. Also included are a 5 x 24 Finderscope, Star Diagonal, 18mm Ocular - .96" and 30mm Ocular - .96", Photo Tripod Adapter, Lens Cap, Carrying Case and Instruction Manual. A huge assortment of visual and photographic accessories including wide angle and high power eyepieces, camera adapter, etc., are also available.

For more information on The C90 Astro contact Celestron for our Tech Sheet. The Tech Sheet contains detailed information on The C90 Astro, how to use it and what you can see with it.



# THE C5 TELESCOPE



C5 PHOTOGRAPHS



• Excellent for observing deep sky objects — see our slide sets!

The Celestron C5 is an exceptionally lightweight, compact Telescope for people who put a premium on portability. This Schmidt-Cassegrain Telescope is only 11-inches long and weighs only 13 lbs. Yet, it is an astronomical telescope of remarkable quality. Its full 5-inches of aperture (diameter of light collecting surface) gathers enough light to provide exceptional astronomical viewing.

This 5-inch aperture, 1250mm focal length astronomical Telescope, built with Celestron's famous precision optics, is large enough to show you breathtaking views of celestial objects under dark sky, such as the Ring Nebula, dark clouds in the Orion Nebula, globular star clusters resolved to the core, the cloud belts of Jupiter, the Crepe ring of Saturn, the phases of Venus, or the craters, mountains and rills of the Moon. You'll also be able to see the dust on the wings of a butterfly 25 feet away, or the markings on a Goldfinch from 100 feet.

The ultra-compact C5 is light enough to be carried to any viewing site easily. It's small enough to fit in a backpack for hiking or camping, and takes up less trunk or storage space than a bag of groceries.

The C5 Optical Tube Assembly (actual viewing instrument) comes mounted in a Sturdy, Swing-Through Fork Mount,™ with Clock Drive and Slow-Motion Controls. It fits quickly and easily onto the Celestron Adjustable Tripod and Equatorial Wedge for astronomical viewing and photography.

It's easy to attach your SLR camera to the C5 for terrestrial, planetary and lunar photography. The C5 can also be used as a high quality spotting scope for bird watching, scenic viewing, people watching and more.

The C5 comes standard with a Sturdy, Swing-Through Fork Mount,™ and Clock Drive, 5 x 24 Finderscope, Star Diagonal - 1 1/4", 25mm Orthoscopic Ocular - 1 1/4", 12mm Orthoscopic Ocular - 1 1/4", Lens Cap, Carrying Case, Instruction and Accessory Manual.

- 5 inches of clear aperture
- 1250mm effective focal length
- f/10 photographic speed
- 11 inches long
- Weighs 13 lbs.
- 305 times the light gathering power of the human eye
- Hand-figured, laser-tested, precision optics
- Designed for astronomers who place a premium on portability, nature enthusiasts, and those interested in lunar and planetary photography.
- Rugged, Sturdy, Swing-Through Fork Mount (Trademark #1,219,531)
- Setting Circles, Slow-Motion Controls, Clock Drive
- 25-year warranty

## SUGGESTED BASIC PACKAGE

- C5 Telescope
- Celestron Adjustable Tripod
- Celestron Equatorial Wedge 5/8"
- 6mm Orthoscopic Ocular-1-1/4"
- Porro Prism - 1 1/4"
- T-Adapter
- T-Ring (specify camera)

For more information on the C5 ask for our Celestron Tech Sheet. Each Tech Sheet contains detailed information on a specific instrument, how to use it, and what you can see with it.



# SUPER C8 TELESCOPE WITH BYERS WORM

## SUPER CELESTRON 8

The search for the perfect telescope for serious beginners has disappointed many amateur astronomers. Now Celestron has changed all that. For the first time, there is one perfect beginner's telescope on the market. It is called the Celestron Super C8. No other telescope incorporates so much modern technology - technology that makes it simple to use, and delivers the performance you want.

The Super C8 starts with the superb precision optics and design of the famous Celestron C8 Telescope. It adds an amazingly accurate Sidereal Rate Byers Worm Gear Drive and a super-stable Drive Base. It includes, at no extra cost, Celestron's High Transmission Coatings, a 26mm Plössl Ocular, a 7mm Orthoscopic Ocular, an 8 x 50 Finderscope and a Deluxe Latitude Adjuster.

The Super C8 is a large aperture telescope. This means it has a large effective diameter for great light grasp. It's big enough to really show you the universe in all its glory. You'll see the Moon and the planets, the fantastically beautiful galaxies, nebulae, globular star clusters and more. Yet the Super C8 Telescope is small enough to be carried easily wherever you go.

The Super C8 is driven by a Byers Worm Gear Drive, the most accurate drive system ever mass manufactured. The Celestron Byers Drive is a sidereal rate drive, for the ultimate in worm gear drive precision. It far surpasses the slow rate drive available from other manufacturers. Designed and machined by Ed Byers in his California plant, the drive tolerance of this system, manufactured with computer-controlled tooling, is incredible. No other stock telescope drive system even comes close.

Tracking is so smooth with this worm gear drive that there is virtually no periodic error, no minute jerks as the gears move across each other. There is so little tracking error, that drive correction is minimal and easily accomplished. Astrophotography is suddenly a pleasure with the Super C8, instead of a potentially frustrating challenge.

The Super C8 drive base far surpasses any other drive base for stability and resistance to flexure. In fact, it is the most stable, portable drive system ever offered in amateur astronomy. The oversize polar axis (shaft) of this essentially flexure-free system is constructed of hardened steel. The shaft and base are double supported by a system of structural ribbing that creates a network of strength and support. A huge (7.5") diameter thrust surface is integral with the gear assembly, and grade A bearings provide the mount with gear smooth accuracy.

The Super C8 is built with the most highly refined and polished precision optics you will find in any commercial telescope. Every set of optics in every Super C8 is hand-figured, hand-collimated and laser tested. The corrector plate of every Super C8 is coated with Celestron's high transmission, magnesium fluoride, anti-reflection coating. This coating allows the transmission of 6 - 10% more light through the system for brighter, higher contrast images.

The Super C8 comes with a 26mm multi-coated Plössl Ocular. Celestron chose not to supply just any eyepiece with the Super C8. We wanted to give the telescope buyer an eyepiece that could measure up to the quality of our optics. The 26mm Plössl is quite possibly the best low power eyepiece you will ever find. Selected by Celestron's top engineers - its image sharpness, contrast, and wide field of view are phenomenal. Its comfortable eye relief make it perfect for observing with or without eyeglasses. A high power 7mm orthoscopic eyepiece is also standard.

The Celestron Super C8 makes finding celestial objects easy, with a fully achromatic, convertible 8 x 50 Finderscope that gives you a choice. Use it as a straight through Finderscope, or convert it to a right angle Finderscope instantly.

The Super C8 incorporates Celestron's Deluxe Latitude Adjuster, to become what we call a "No-Tool Telescope". Throw away the bolts to mount the Wedge to the Tripod, and the Telescope to the Wedge. Throw away your crescent wrench. From now on, assemble your Telescope with hand-tightening bolts, and adjust the tilt of your Wedge (latitude) by turning a large handle. No more struggling with the Telescope and Wedge when you want to polar align. The Super C8 can be adjusted from 60 to 20 degrees of latitude, with a level Tripod. For greater range use Celestron's new Adjustable Tripod and tilt it slightly. (Tripod and Wedge are not included in the Super C8 package).

Each Super C8  
is Optically Certified-  
Exclusive From Celestron



### SUPER C8 STARBRIGHT OPTIONAL COATINGS PACKAGE

To increase light transmission by as much as 12% order Celestron's state-of-the-art "Starbright" coatings group. These "enhanced", overcoated, tarnish-proof, silver coatings will make you think you are using a telescope more than 8 inches in diameter. Deep sky objects will be noticeably brighter and have higher contrast than in uncoated 8-inch telescopes.

VISIT YOUR CELESTRON DEALER TO SEE HOW SURPRISINGLY AFFORDABLE  
THE SUPER C8 REALLY IS!





C8 PHOTOS  
M20 ABOVE  
M13 LEFT

### SUPER C8

- 200mm (8 inches) clear aperture
- 2000mm effective focal length
- f/10 photographic speed
- Photographic and visual capabilities
- 17 inches long
- Weighs 23 lbs.
- 791 times the light gathering capacity of the human eye
- Hand-figured certified optics
- Designed for anyone who wants to explore the universe both visually and photographically, easy and fun to use.
- 25-year warranty

### BASIC PACKAGE

- Super C8
- Wedge 5/8
- Adjustable Tripod
- 10mm Plössl Ocular - 1 1/4"
- Deluxe Barlow Lens - 1 1/4"
- Celestron Sky Maps

### OPTIONAL PHOTOGRAPHIC PACKAGE

- T-Adapter and T-Ring
- Tele-Extender
- Counterweight Set
- Off-Axis Guiding System
- Quartz Drive Corrector

Celestron is proud of our Super C8 Telescope, the first Telescope ever to offer precision optics, a precision tracking system, extreme portability and exceptional accessories altogether in one affordable package.

Take the Super C8 out with you to a viewing site. It's only 17 inches long, and it can be handled easily by one person. Set up the Telescope on the Wedge and Tripod. With the Deluxe Latitude Adjuster, set up and dismantling time are a matter of minutes. Attach the Star Diagonal and standard 26mm Plossl eyepiece to the 2000mm focal length Telescope, for 80 power, and start to observe. (Power is variable on the Super C8. Use eyepieces of shorter focal length for higher power viewing.) You'll see views of planetary nebulae, globular star clusters, emission nebulae and open star clusters that are so bright and detailed they appear to be three dimensional. You'll see the planets of our solar system in brilliant, dynamic detail. The Moon will reveal its textured surface of mountains, craters and rills.

Remove the Star Diagonal and eyepiece and replace them with an inexpensive T-Adapter and T-Ring to attach your camera to the C8. It snaps on just like your standard lens (with a T-Ring for your particular camera). It is now an astro camera capable of taking astrophotographs like those in this catalog. The precision Byers Worm Gear Drive will smoothly track the sky. Lunar, planetary and piggyback photography will produce incredibly sharp photographs of fine detail, without tracking error. You will still need a Drive Corrector for long, deep space photographs, but you will find that the Byers Drive requires very little adjustment once you are properly polar aligned.

All the features of the new Super C8; the Byers Worm Gear Drive, the Special Coating, the 8 x 50 Finderscope, the 26mm Plössl Ocular, the Deluxe Latitude Adjuster, the Star Diagonal and the Sturdy Swing Through Fork Mount with Slow-Motion Controls make the Super C8 the best all-around Telescope for serious beginners Celestron has ever offered. It's even easier to use visually than the Celestron C8, the (up until now) amateur standard. Photographically it's head and shoulders above the rest, including the regular C8 with its spur Gear Drive.

Celestron admits the Super C8 is not for everybody. Some amateur astronomers need the extreme portability and relatively large aperture offered by the C5 Telescope. The C5 is so small and lightweight it can be carried by backpack into the wilderness for terrestrial and astronomical use.

Some very serious amateur astronomers, as well as schools and astronomy clubs, will be better served by Celestron's even larger aperture telescopes - the C11 and C14. These Telescopes also feature a Worm Gear Drive for near error free tracking. Their larger aperture collects even more light and provides even more focal length, for larger, brighter images. However, their greater expense, heavier weight, and larger size make them less appropriate for serious beginners.

The Super C8 is the Telescope of your future. Go to your Celestron Dealer to see the New Super C8. It is the telescope of the 21st Century, designed, manufactured and distributed by Celestron . . . today.

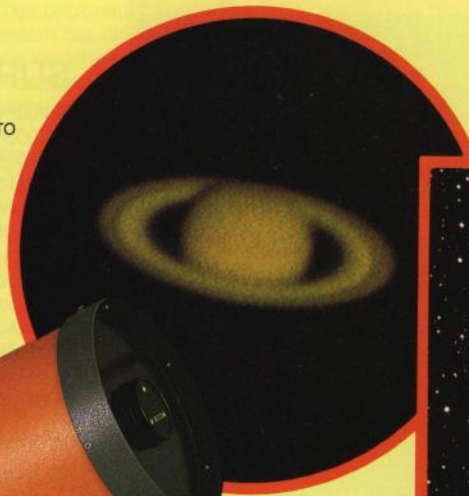
The Super C8 is available in two colors, Celestron orange, or our all new high tech black (\$25.00 additional). Please specify your choice of colors when ordering.

For detailed information about the Super C8 Telescope, ask for the Super C8 Tech sheet, a fact-filled brochure describing the Super C8 system - what you can see with it, and what you can do with it - in great detail.



# CELESTRON 8

SATURN — C8 PHOTO



C8 PHOTO — M16



- 8 inches of clear aperture
- 2000mm effective focal length
- f/10 photographic speed
- 17 inches long
- 21 lbs. of weight
- 791 times the light gathering power of the human eye
- Hand-figured, laser-tested precision optics
- Designed for serious beginning amateur astronomers whose main interest is in celestial observing
- Rugged, Sturdy, Swing-Through Fork Mount, (Trademark #1,219,531)
- Setting Circles, Slow Motion Controls, Clock Drive
- 25-year warranty

## SUGGESTED BASIC PACKAGE

- C8 Telescope
- Celestron Tripod 5/8/90
- Celestron Equatorial Wedge 5/8
- 32mm Erfle Ocular - 1 1/4"
- Celestron Star Maps
- Deluxe Latitude Adjuster

The Celestron 8 inch Telescope, the C8, is the world's most popular amateur telescope. Its full 8-inch precision optical aperture (diameter of light collecting surface) gathers over 700 times the amount of light of the human eye, for brilliant, high contrast, detailed images of exceptional quality.

You'll be able to see faint knots of stellar associations in the Galaxy M33, as well as its giant nebula NGC604, the glowing intricately detailed filament of the Orion Nebula, the jewel box like appearance of the Globular Star Cluster M35, and its faint companion-cluster - under a dark sky.

You'll see amazing detail in the planets; the oranges, reds and browns of Jupiter's clouds, and the sharp clear disks of the Jovian Moons. The main division of Saturn's Rings (Cassini Division) will be instantly visible on "steady" viewing nights.

Our own Moon will reveal its landscape of amazing textures and contrast between light and shadows.

Use your C8 as a terrestrial spotting scope in the daytime. It's perfect for nature viewing, bird watching, and observing all kinds of people, places and things.

The C8's Schmidt-Cassegrain design folds up light within the tube, allowing the C8 to give a long, 2000mm focal length in a lightweight, compact tube. It's only 17 inches long, and weighs only 21 lbs.

The C8 is all the telescope you need if astronomical observing is your main interest. (Celestron suggests the Super C8 for those interested in astrophotography.) The C8 Optical Tube Assembly (the actual viewing instrument) is mounted in a Sturdy, Swing-Through Fork Mount™ with Clock Drive, Slow-Motion Controls and Setting Circles. To use it, simply mount the Telescope on a Celestron Equatorial Mount and Tripod (not included in the base price). Slip in a low to medium power eyepiece (Ocular) into the Telescope for easy location of objects, and use the Finderscope or Setting Circles to find the object you want to see. The Slow Motion Controls will let you fine tune the location of the object in view of the main Telescope. You'll be able to spend hours enjoying our incredible Universe.

The C8 will accept your SLR camera, with an inexpensive T-Adapter and T-Ring (specify camera), for lunar, planetary and terrestrial photography. With a Drive Corrector, the C8 can become a deep space astrocamera.

In the daytime use your C8 as a spotting scope or telephoto lens. Mount it by the window of your view home, or take it with you to a viewing site. It will show you close-up views - for your observing and photographic pleasure - in sumptuous detail.

Every C8 comes with a Sturdy Swing-Through Fork Mount™ and Clock Drive, with Setting Circles and Slow Motion Controls, 6 x 30 Finderscope, Star Diagonal - 1 1/4", 25mm Orthoscopic Ocular - 1 1/4", 2x Barlow Lens - 1 1/4", Lens Cap, Carrying Case and Instruction Manual. Special coatings to increase light transmission by 6 to 10% (especially useful in photography), and many visual and photographic accessories are also available.

For more information on the C8 ask for our Celestron Tech Sheet. The Tech Sheet contains detailed information on the C8, how to use it, and what you can see with it.



# THE C11

M13

C11 PHOTO



C11 PHOTO



M17

Celestron designed the C11 Telescope for the serious astronomer who wants the terrific light gathering power of 11 inches of aperture (diameter of the light collecting surface), in a portable Telescope. Celestron designed the C11 for the amateur astrophotographer who wants the precision tracking of a spring-loaded worm gear Clock Drive. Celestron designed the C11 for the amateur astronomer who wants a large aperture Telescope that is easily transportable by one person, sets up in minutes - with no fuss, and can be transported to a dark sky site conveniently and easily.

The C11 is a 2800mm, f/10 Telescope built with Celestron's laser-etched, hand-matched, precision optics. It will open up the Universe in a feast for your eyes, and for your Single Lens Reflex Camera. When you observe galaxies like M32, and NGC205 you'll see a definite nucleus and surrounding halo of stars and dust. On a night of good seeing you may see color in the smaller planetary nebulae such as NCG7009. Under dark skies, M42 - the Orion Nebula appears as a tangled mass of swirling filaments of gas and dust, edged in tints of green and red, and Globular star clusters are resolved to the core and have a definite structure of individual stars. Omega Centuri, for example, will fill 2/3 of the field with a 26mm Plössl Ocular.

When you turn the C11 to the planets you'll be enchanted by the amazing clarity, detail and dimensionality of the image. You'll easily see the Cassini Division in the Rings of Saturn, the famous red spot, and colorful clouds and small storms of Jupiter. Even the Polar Caps on Mars will be visible under a dark sky, and our own Moon will jump out of the dark in bold, gorgeous detail.

The versatile C11 offers more than gorgeous views. Exchange the visual accessories for an inexpensive T-Adapter, T-Ring and your SLR camera, and take planetary and lunar photographs of exceptional contrast and resolution. For deep space photography add a Drive Corrector.\* With a little patience and practice you'll be able to take professional quality photographs that match observatory photographs for magnificent colorful detail.

The C11 is an astronomical Telescope of Schmidt-Cassegrain design that folds up light for the long focal length, and terrific light gathering capability of a large telescope - in a lightweight, portable, compact package. The C11 weighs only 57 lbs. with Sturdy, Swing-Through Fork Mount,™ and Clock Drive. It fits easily into a compact car, can be carried to a viewing site by one person, and sets up easily in moments.

The C11 is a professional quality optical instrument that is incredibly easy to use. Mount it on a Celestron Tripod and Equatorial Wedge, slip in a low power eyepiece, for easy object finding, locate the object with your Setting Circles or Finderscope and observe the awe inspiring splendor of the heavens.

Use your regular SLR camera to photograph what you see. Your C11 essentially becomes a super telephoto lens. The Worm Gear Clock Drive holds the object steady in the frame as the Earth rotates around its axis.

The incredible C11 comes with Sturdy, Swing-Through Fork Mount,™ Worm Gear Clock Drive, 18mm Orthoscopic Ocular - 1¼", Lens Cap, Carrying Case and Instruction Manual. Special Coatings that increase light transmission by 6-10%, and many visual and photographic accessories are available.

\*All clock drives from amateur to professional must be corrected during long exposure photographs. None are immune to error.



## SUGGESTED BASIC PACKAGE

- C11
- Special Coatings
- Celestron Equatorial Wedge - 11/14
- Celestron Tripod - 11/14
- 26mm Plössl Ocular - 1¼"
- 10mm Plössl Ocular - 1¼"
- T-Adapter
- T-Ring (specify camera)

- 11 inches of clear aperture
- 2800mm effective focal length
- f/10 photographic speed
- 25.5 inches long
- 57 lbs.
- 1546 times the light gathering power of the human eye
- Hand-figured, laser-tested optics
- Designed for serious astronomers, astronomy clubs, educators, researchers, astrophotographers - anyone who wants the luxury of large aperture in a portable telescope
- Rugged, Sturdy, Swing-Through Fork Mount (Trademark #1,219,531)
- Setting Circles, Slow-Motion Controls, Spring-Loaded Worm Gear Clock Drive

For more information on the C11 contact Celestron for our C11 Tech Sheet. The Tech Sheet contains detailed information on the C11 Telescope, how to use it, and what you can see with it.



# THE C14

M42



• How good is it?  
A C14 is being  
used as an optical  
testing device for  
NASA's Space  
Telescope!

ACTUAL C14 PHOTOS!



- 14 inches of clear aperture
- 3910mm effective focal length
- f/11 photographic speed
- 30 inches long
- Weighs 108 lbs.
- 2436 times the light gathering power of the human eye
- Hand-figured, laser-tested optics
- Designed for the serious amateur astronomer, educator, researcher or industrial user who is ready to experience the ultimate transportable telescope
- Sturdy, Swing-Through Fork Mount (Trademark #1,219,531)
- Setting Circles, Worm Gear Clock Drive, Electric Slow Motion Controls
- 25-year warranty

## SUGGESTED BASIC PACKAGE

- C14
- Special Coatings
- Equatorial Wedge - 11/14
- Tripod - 11/14

There is not another telescope in the world like the Celestron C14. It is the ultimate transportable telescope - a professional quality, scientific, optical instrument of incredible potential and versatility. All over the world serious astronomers, educators, researchers, and industrial users make use of the superb precision optics and tremendous light gathering power of this large aperture (diameter of the light collecting surface) Telescope. The 14-inch aperture C14 collects over 2,430 times the amount of light of the human eye, for visual and photographic images of incredible impact and resolution. Astrophotographers depend on the C14's Worm Gear Drive for error-free tracking during planetary and lunar photography, and for easy guiding during deep sky photography.\*

The C14 is a Schmidt-Cassegrain telescope made with Celestron's precision optics. This design enables the telescope to actually fold up light inside the tube for a remarkably long focal length in a compact, portable instrument, with a fantastic visual and photographic reach.

Deep sky objects will appear to burst out of the dark background of space when you observe them through the C14's standard 2" Star Diagonal and 1 1/4" Oculars. You'll be able to explore details of the evening sky unavailable through any other commercial telescope. You'll thrill at the intricate filamentary network of the Veil Nebula with its many knotty brightenings. Globular star clusters will be so brilliant and resolved you'll think you could reach out and touch them. Your senses will marvel over the fact that the objects you see are tens, hundreds, or thousands of light years away.

When you turn the C14's incredible light grasp to our own neighbors in the solar system, the sights will astound you. You'll see bright Venus go through phases, and perhaps some surface details, and the rosy hue of the Crepe Rings of Saturn, under good observing conditions.

The cloud belts of Jupiter will display an enormous range of color from cream through orange and gray. You'll even detect detail on Ganymede, the largest of the Jovian moons, and the Polar Caps on Mars.

The Optical Tube Assembly, Drive Base and Fork Arms of the 108 lb. C14 are modular. They separate into 4 pieces of not more than 50 lbs. each. This means the C14 can be transported easily, and set up quickly by one person. Take it to a dark viewing site in your car, set it up on a Celestron Tripod and Wedge in less than 10 minutes and observe the universe around you in gorgeous detail and brilliance. The ten power Finderscope and Electric Slewing Controls make locating celestial objects simple and expedient.

Switch the Ocular and Star Diagonal for your SLR camera and use the C14 as an ultra-telephoto lens for taking photographs worthy of the greatest observatories in the world. Celestron's superior precision optics and precision Worm Gear Clock Drive provide the tools you need to take glorious photographs of the Moon and planets, and colorful, detailed photographs of deep sky objects like the elusive Horsehead Nebula, when you employ a Drive Corrector.

High schools, colleges, universities, astronomy clubs, researchers, small observatories and serious amateurs will find the C14 is the perfect telescope for a permanent observatory (a pier is available) and for a teaching or research facility.

The C14 comes standard with a 2" ID Star Diagonal (1 1/4" Adapter), 10 x 40 Finderscope, Sturdy, Swing-Through Fork Mount,™ with Worm Gear Clock Drive, Setting Circles, Electric Slow - Motion R.A. and Dec Controls, 6mm Orthoscopic Ocular - 1 1/4", 12mm Orthoscopic Ocular - 1 1/4", 25mm Orthoscopic Ocular - 1 1/4", 40mm Kellner Ocular - 1 1/4", Illuminator/Map Light, Piggyback Mount, Tele-Extender, T-Adapter, T-Adapter, Counterweight Set, Lens Cap, Carrying Case and Instructions. Special optical coatings that increase light transmission by 10% (especially useful for astrophotography), and other visual/photographic accessories are also available.

\*All Clock Drives from amateur to professional must be corrected during long exposure photographs. None are immune to error.

For more information on the C14 contact Celestron for our Tech Sheet. The Tech Sheet contains detailed information on the C14 Telescope, how to use it, and what you can see with it.



# SCHMIDT CAMERAS

## 5.5-INCH SCHMIDT CAMERA

- 5.5 inches of clear aperture
- 225mm effective focal length
- f/1.65 photographic speed
- 6.35°/inch image scale
- 5.9 x 8.6° sky coverage
- Hand-figured, laser-tested optics
- Designed to be mounted on the C8, C11 or C14
- 25-year warranty



NORTH AMERICAN NEBULAE - 8" SCHMIDT PHOTO

## 8-INCH SCHMIDT CAMERA

- 8 inches of clear aperture
- 300mm effective focal length
- f/1.5 photographic speed
- 4.8°/inch image scale
- 4.5 x 6.5° sky coverage
- Hand-figured, laser-tested precision optics
- Designed to be mounted on the C11 or C14. May be mounted directly into the C8 Fork Arms (guide scope necessary).
- 25-year warranty



Celestron Schmidt Cameras are an important tool for serious amateur astrophotographers. Schmidt Cameras are extremely fast (the 8" is f/1.5 and the 5.5" is f/1.65), wide field, large aperture, long focal length, astronomical, photographic cameras. Mounted atop your clock driven Celestron C8, C11 or C14 (or, in the case of the 8", suspended between the C8 Fork Arms) the Schmidt Camera will enable you to quickly photograph enormous regions of the sky, in great detail, on a single 35mm frame.

The two Celestron Schmidt Cameras are built with Celestron's laser-tested precision optics. Like the C5, C8, C11 and C14 a Schmidt Corrector Plate and Primary Spherical Mirror form the main optics of the system. The Schmidt Cameras, like the Telescopes offer tremendous light gathering ability in a lightweight design. Unlike Celestron's Telescopes, however, the Schmidt Cameras are exclusively designed for photographic use. A piece of film intercepts the light reflecting off the Primary Mirror, making the Schmidt Camera an extremely fast photographic instrument for greatly reduced exposure time. You'll be able to make brilliant, colorful detailed photographs of deep space objects in an exposure time of 6 to 15 minutes (with standard Kodak Ektachrome 400).

The large aperture and focal length of the Celestron Schmidt Cameras ensure large wide angle images of superb resolution. Detail is limited only by the grain of the film.

Celestron Schmidt Cameras are hand-figured and collimated at the Celestron factory for permanent optical alignment. Focus is fixed and factory adjusted, guaranteeing uniformly sharp photographs.

One 35mm film holder is supplied with each Schmidt Camera. Film holders are designed for the specific instrument, so additional holders should be ordered at the time of purchase. A roll film adapter is also available.

### SUGGESTED BASIC PACKAGE

- Schmidt Camera
- Filter Film Holder
- Roll Film Adapter

For more information on the Celestron Schmidt Cameras contact Celestron for our Tech Sheet. The Tech Sheets contain detailed information on the Schmidt Cameras, what they do, how to use them, and how to decide which (the 5.5" or 8") is right for you.



# COMETRON TELESCOPES

The Cometron series telescopes are the perfect telescopes for those who are curious about astronomy, but who either do not have the budget, or do not have the confidence in their interest to make a large monetary commitment. They are Celestron's economy telescopes - to let you make your first exploratory steps into astronomy.

The Cometron telescopes feature Celestron's reliable design and manufacturing techniques in a sturdy good looking package, protected by Celestron's one-year warranty, and good name. Optically they are far better than the toy telescopes sold by others.

## THE SKY GRABBER

The Celestron Sky Grabber is the perfect tool for beginners who are interested in wide angle sky photography. All you need is enthusiasm and your SLR camera with a 50-200mm lens.

Attach your camera to the Sky Grabber. Point the camera at the area of the sky you want to photograph and focus on infinity. Switch on the quartz controlled motor and the Sky Grabber will accurately track the stars automatically, for as long as 15 minutes without any adjustments! A guide scope can be added and the quartz motor drive has both Fast and Stop buttons to make any necessary adjustments during longer exposures. The Sky Grabber motor drive works on penlight batteries, and the motor is effective in both hemispheres. An illuminated polar axis scope is also included for easy polar alignment.



## COMETRON 40 REFRACTING TELESCOPE

The Cometron 40 is a fine telescope for those who are curious about astronomy, but don't wish to invest heavily in optical equipment. You'll be able to see the craters of the Moon, the rings of Saturn, blazing comets, and other wonders of our solar system. You can also use the Cometron 40 for close-up views of things right here on Earth.

The bright orange Cometron 40 will accept any Celestron .96" fully coated Ocular, for extra-bright, sharp images. It features rack and pinion focusing, a wooden Tripod, Moon Mount, 25mm Ocular - .96", F-8mm Ocular - .96", Star Diagonal, Sun Glass and Lens Cap.

### COMETRON 40

- 40mm clear aperture • 800mm focal length • f/20 photographic speed
- 33 inches long • Weighs 5.72 lbs. • 33 times the light gathering capacity of the human eye
- Designed for the beginner on a budget • One-year warranty

The largest diameter telescopes in the Celestron Cometron series are the Cometron 60 and the Deluxe Cometron 60. Both offer 60mm of diameter for over 70 times the light gathering capacity of the human eye.

## COMETRON 60 REFRACTING TELESCOPE

The Cometron 60 is a sharp beginner's or children's telescope that still stays within a minimum budget range. Its 60mm of diameter and light baffling maximize image contrast for bright, sharp views. It is especially good for looking at the Moon, for comet catching and for observing people, places and things on Earth.

The Cometron 60 is available in two colors, bright orange or white (specify color when ordering). It will accept any Celestron .96" fully coated Ocular, and includes an adjustable wooden Tripod, a 25mm Ocular - .96", and F-8mm Ocular - .96", Sun Filter, Star Diagonal and Lens Cap.

### COMETRON 60

- 60mm clear aperture • 800mm effective focal length • f/13.3 photographic speed
- Weighs 11.4 lbs. • 33 inches long
- 73 times the light gathering power of the human eye
- Designed for sharp views of the Moon and planets, basic comet viewing, terrestrial viewing, and for observing the brightest deep space objects.
- One-year warranty

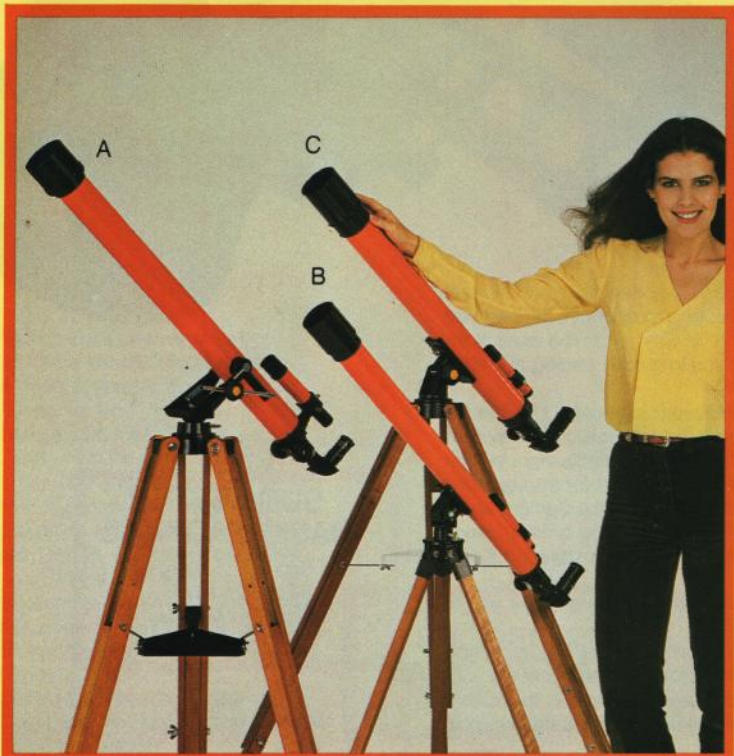
## DELUXE COMETRON 60 REFRACTING TELESCOPE

The Deluxe Cometron 60 features all metal construction, a superior 910mm focal length objective lens system of crown and flint glass, and a fully baffled tube, for unsurpassed image quality in its price range. Use it for extra bright, high contrast views of the Moon, the rings of Saturn, the comets, and the people, places and things on Earth. The lenses of the Deluxe Cometron 60 are fully achromatic, assuring you color perfect, crystal sharp images for hours of viewing pleasure.

The Deluxe Cometron 60 has an attractive wooden Tripod and glossy orange tube. It will accept any Celestron .96" Ocular for viewing at different powers. An adjustable wooden Tripod, 25mm Ocular - .96", and an F-8mm Ocular - .96", Sun Filter, Accessory Case, Star Diagonal, and Lens Cap are included.

### DELUXE COMETRON 60

- 60mm clear aperture • 910mm effective focal length
- f/15 photographic speed • All metal tube, fully baffled • Weighs 17 lbs.
- 35 inches long • 73 times the light gathering power of the human eye
- Designed for beginning amateur astronomers who want the best budget telescope available • One-year warranty



A) DELUXE COMETRON 60 B) COMETRON 40 C) COMETRON 60

For more information on the Cometron Telescopes, ask for a Celestron Tech Sheet. Each Tech Sheet is full of information about the Telescopes, how you use them, and what you can see with them.



# ASTRONOMICAL SLIDES

Many amateur astronomers and astrophotographers have chosen to thank Celestron for our telescopes, by sending us copies of astrophotographs taken through their C5's, C8's, C14's and Schmidt Cameras. As a service to them, and to you Celestron now makes the best slides available in sets of twenty colorful slides.

## SET #1

Celestron C5 astrophotographs: The Moon, Saturn, Open Cluster M11, Galaxy M33. Celestron C8 astrophotographs: the Moon, Solar Eclipse, Andromeda Galaxy M31, Orion Nebula M42, Sombrero Galaxy M104. Celestron C14 astrophotographs: Mars, The Moon (two), Omega Nebula M17, Whirlpool Galaxy M51. Five and one-half inch Schmidt Camera: Double Cluster in Perseus, Rosette Nebula. Eight-inch Schmidt Camera: Comet d'Arrest, Eagle and Omega Nebulae, Andromeda Galaxy M31, Galaxy M33.



## SET #2

Celestron C5 astrophotographs: The Moon, Omega Nebula M17, Andromeda Galaxy M31, Ring Nebula M57. Celestron C8 astrophotographs: The Moon, Lunar Eclipse, Saturn, Jupiter, Globular Cluster M3, Globular Cluster M13, Trifid Nebula M20. Celestron C14 astrophotographs: The Moon, Dumbbell Nebula M27, Galaxy NGC4565. Five and one-half inch Schmidt Camera: Pleiades Open Cluster M45, Andromeda Galaxy M32, North American Nebula. Eight-inch Schmidt Camera: California Nebula, Rosette Nebula, Comet West.



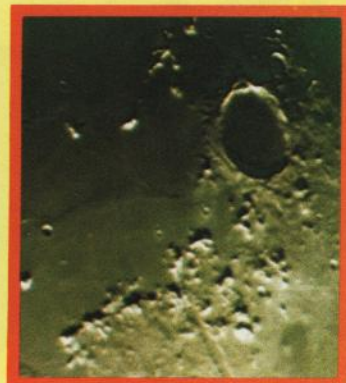
## SET #3

Celestron C5 astrophotographs: The Moon, Solar Eclipse, Jupiter, Lagoon Nebula M8. Celestron C8 astrophotographs: The Moon, Partial Eclipse, Mars, Globular Cluster M15, Eagle Nebula M16, Dumbbell Nebula M27, Open Star Cluster M46 and Planetary Nebula NGC2438. Celestron C14 astrophotographs: the Moon, Saturn, Globular Cluster M13, Ring Nebula M57. Five and one-half inch Schmidt Camera: Orion Nebula and surrounding area, Veil Nebula, Galaxies M81 and M82. Eight-inch Schmidt Camera: Tarantula and Magellanic Cloud, Pleiades Cluster M45.



## SET #4

Celestron C5 astrophotographs: Solar Eclipse, Lunar Eclipse, Dumbbell Nebula M27, Double Cluster in Perseus. Celestron C8 astrophotographs: The Moon, Solar Disc, Sunspots, Crab Nebula M1, Lagoon Nebula M8, Omega Nebula M17, Pleiades Cluster M45, Ring Nebula M57. Celestron C14 astrophotographs: The Moon, Jupiter, Globular Cluster M3, Galaxies M65 and M66. Five and one-half inch Schmidt Camera: The Horsehead Nebula, Nebulae M8 and M20. Eight-inch Schmidt Camera: North American Nebula, Eta Carinae NGC3372.





# NEWTONIAN REFLECTOR TELESCOPES

## CELESTRON 6-INCH NEWTONIAN REFLECTOR C6

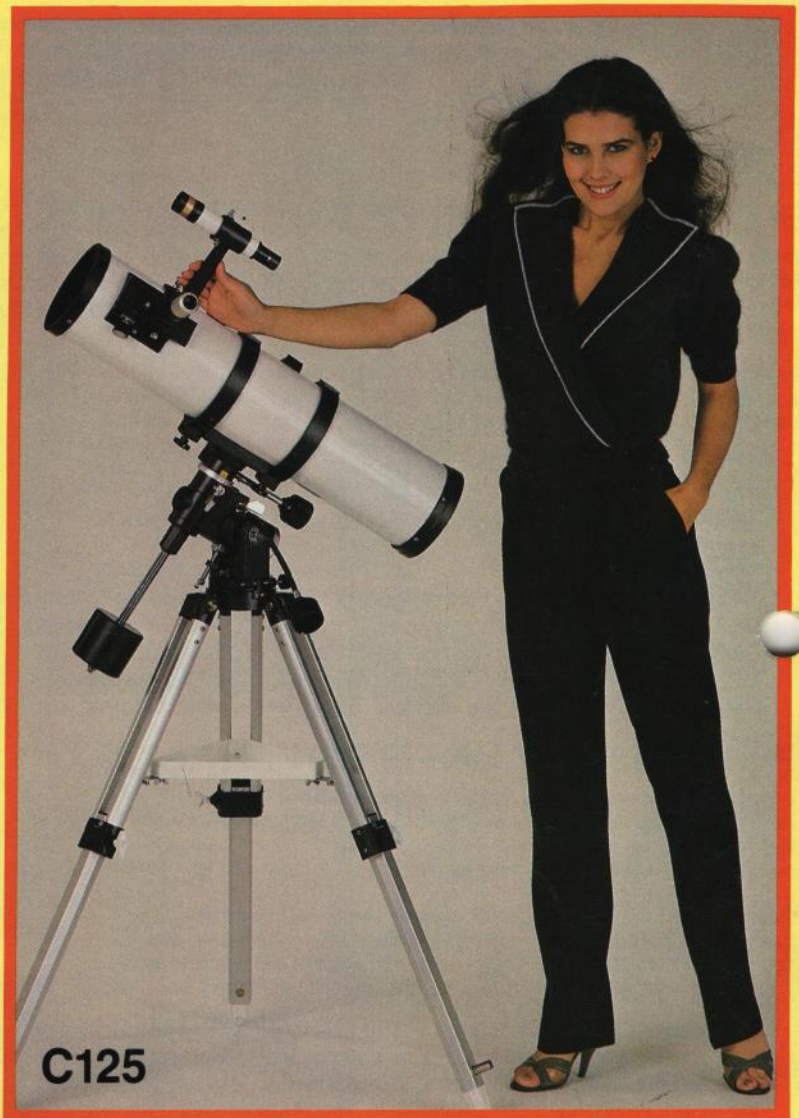
The 6-inch Newtonian Reflector Telescope has long been the "standard" first telescope for serious, beginning amateur astronomers. Why? First, a Newtonian has the best diameter-to-cost ratio - you'll collect a lot of light with a 6-inch Newtonian telescope for a very reasonable cost. Second, a well made 6-inch telescope, such as the C6, will show you a lot of the Universe. Third, a 6-inch Newtonian is a very convenient size for starting an adventure in astrophotography and for transportation to a dark sky site.

The Celestron C6 six-inch Newtonian Reflector is a *quality* telescope that will open up the Universe for your enjoyment. The C6 is built with precision optics which have an *f/5* configuration for superb deep sky and comet viewing. Use a higher power eyepiece or a Celestron Deluxe Barlow Lens and you'll get detailed planetary images. The *f/5* focal ratio means for visual use you'll get a wide angle view of the sky, and for photography you'll get the short exposure times that make astrophotography less challenging.

Newtonian reflector telescopes aren't new, the Celestron Newtonians are, however. The Celestron Newtonian C6 Telescope offers a superb 1 1/4" multi-coated Plössl eyepiece (the finest available, not the "obligatory" low quality eyepieces found on other Newtonian telescopes); a precision, multi-coated optical system that will give you a bright, detailed image; a sturdy, Equatorial Mounting with Slow Motion Controls *standard*, Setting Circles *standard*, and Elevation and Azimuth Fine Adjustments *standard*. Also included is an Accessory Tray and an Adjustable Tripod. The Celestron Newtonian Telescopes have a unique system of supporting the optical elements that allows the system to stay in optical alignment — other Newtonian telescopes are notorious for needing constant tinkering in order to keep performance up to standard. Add a few accessories and you can photograph the night sky as well - and you don't need to modify the telescope as with other Newtonians. With the proper accessories the C125 or C6 will allow you to accomplish exciting deep sky astrophotography - how? The Celestron Newtonians are designed to be rigid and they have a worm gear standard (you only need to add the motor). When you compare feature for feature, the Celestron Newtonian Telescopes stand far above the rest, except in price.

### CELESTRON C6 SPECIFICATIONS

- Optical System: High performance Newtonian; Celestron quality
- Light Grasp: Over 450 times the light grasp of the human eye
- Standard Ocular: 26mm Plössl Ocular - 1 1/4" diameter; multi-coated
- Maximum Power: Approximately 360X (higher under steady skies)
- Mount: "German" style equatorial
- *Standard* Mount Features: Slow Motion Controls in both axes; Altitude Adjustment; Azimuth Adjustment; Setting (star locating) Circles in both axes; Adjustable Counterweight; Altitude Angle Scale; sturdy die cast metal construction
- Tripod: Adjustable, vibration absorbing, wooden construction; with Accessory Tray
- Coatings: Multi-coated on eyepiece and mirrors (20% more effective than other Newtonian telescopes)
- Finderscope: 6x30 wide angle
- Options Include: Camera Adapters, Guide Telescopes, Polar Axis Finder, Pulse Motor (quartz/integrated circuit controlled); Eyepieces, Filters, a full assortment of other accessories.
- Focus: Unique Celestron slide focus - allows a smaller secondary obstruction for critically sharp images.
- Tube color: Orange



## CELESTRON 5-INCH NEWTONIAN REFLECTOR C125 (125mm diameter)

The 5-inch diameter C125 collects over 300 times as much light as your eye and can magnify (under stable air conditions) 300 times the power of your eye. The C125 uses the same stable mount as the C6, our larger Newtonian telescope, but because of the smaller tube assembly on the mount, the C125 is generally considered more stable. The C125 is noticeably lighter than the C6, and, therefore, easier to transport. Mechanical features are the same as the C6, the C125 is offered only with a white tube and matching adjustable aluminum tripod for a polished, "high-tech" appearance that matches its high performance capabilities.

For more information about the Celestron Newtonian Telescopes ask Celestron for our Newtonian Tech Sheets.



**CELESTRON**<sup>®</sup>  
PRECISION OPTICS

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