

# SUPER C8

## INSTRUCTIONS / INFORMATION

Your new Super C8 is both similar to and different than the regular C8. You will find that most of the information in the enclosed instruction manual is accurate and complete, and we recommend that you read it thoroughly. The purpose of this instruction/information sheet is to point out the special features of the Super C8 and to explain how they work.

### BYERS WORM GEAR DRIVE – THE TREMENDOUS ADVANTAGE (Patent Pending)

The Celestron-Byers Worm Gear Drive is the most accurate drive system ever created for amateur astronomers. In independent tests by amateurs around the U.S.A. the Celestron-Byers Worm Gear Drive was found to be far more accurate than any other commercial drive offered by any other manufacturer. The incredible accuracy of this true sidereal rate drive is especially noticeable during long exposure astrophotography. Periodic error is almost nonexistent. Once you are properly aligned, no adjustments need be made during planetary, lunar and most piggyback photography. You will find that even during long exposure prime focus photography with the Super C8 very few adjustments are necessary. The incredible accuracy is achieved by precision machining and by a worm wheel that has 359 teeth (almost twice the number of competitive units). The Celestron Worm Gear Drive has a diameter of 7.54 inches, also essential for stability and error-free tracking.

Use your Super C8 Clock Drive the same way you use the regular C8 drive (as described in the instruction manual). Polar align your telescope, locate a celestial object in its field of view, center it, plug in the drive and it will track. When you plug in the drive a light will turn on inside the window of the drive base. The clutch (Right Ascension clamp - see pg. 3 of the manual) should be released ("unlocked") prior to moving the telescope in the left-right (east-west) direction. To operate the R.A. Slow-Motion Control (below the R.A. clamp), the R.A. clamp will need to be unlocked, although some pressure should be kept on the R.A. clamp so the instrument does not wander freely as you center an object.

### EXTRA STABLE DRIVE BASE - Adjusting the Thrust Surface

The extra stable drive base is the most stable portable drive system available in the mass market. It's the foundation for your total visual and photographic enjoyment of the Super C8. The drive base of the Celestron Super C8 is remarkably trouble-free, and, under normal conditions, you'll never need to adjust the unit. If excessive wobble is found in the polar axis you can stabilize the system by adjusting the three thrust points within the drive base. DO NOT open the drive base to do this, you may adjust these by using a screwdriver at the three access ports on the bottom of the drive base. The Celestron factory adjusts these at the time of manufacture and you should seldom, if ever, find a need to adjust the unit. If the adjustment is off, the unit could wobble excessively about the polar axis as you manually precess the unit about the polar axis.

As you examine the Super C8 you will note that the R.A. and Dec. locking knobs are different than those pictured in the manual. The new locking knobs are easier to use, especially in the dark.

### THE BEST OPTICS – CERTIFIED

Celestron has always provided the best precision optics an amateur astronomer can find. All Celestron C8's carry on that Celestron tradition by taking a step into the future. Every set of Celestron C8 optics has been inspected in a Celestron designed and manufactured double pass autocollimator. Every set is inspected by a proprietary method capable of detecting optical surface deviations of 1/100th wave (ten times more accurate than any other manufacturer). Every set is examined using Foucault and Ronchi tests to determine optical performance, every set has an airy disk that is shown to concentrate light on the image not scattered on the focal plane, and every set is certified by a senior member of Celestron's optical department, so that you can be sure you are getting the best. Celestron's C8 optics are diffraction limited and warranted to 1/10th wave (1/30 R.M.S.).

### SPECIAL COATING AND OPTIONAL STARBRIGHT COATINGS

On every Super C8, Celestron coats both sides of the corrector plate with special magnesium fluoride coatings. This coating increases light transmission over a regular 8-inch telescope by as much as 10%.

Celestron also offers optional Starbright coatings that increases light transmission another 12%. The Starbright coatings are enhanced silver mirror coatings that have been overcoated so they cannot tarnish. The starbright coatings are most noticeable when you look at deep sky objects - they will be brighter and have higher contrast when compared to the view through an uncoated telescope.

## **THE FINEST PLOSSL OCULAR - The Super C8 comes standard with 26mm (77 power) and 7mm (285 power) oculars.**

We are convinced that the 26mm Plössl Ocular is the best general purpose ocular available to the amateur. It offers phenomenal image sharpness, high contrast, a wide field of view (50°) and tremendous eye relief. Use it for viewing deep sky objects, the Moon and planets and for daytime terrestrial viewing. Use the 7mm (high power) ocular for close-up views of the Moon and planets and for splitting double stars. The 7mm ocular is of the orthoscopic design.

Both oculars will slip directly into the star diagonal, a set screw holds them in place.

Celestron recommends that you make it a habit to locate any objects with the low power (26mm) ocular. (It's much more difficult to find objects in a high power ocular because the field of view is so small.) Once you have located and focused on the object you can switch to a high power ocular. You may use either eyepiece for lunar and planetary photography with an optional Tele-Extender (p.19 of your manual) but the 26mm Plössl is recommended for your first attempts.

## **A POWERFUL EASY TO USE FINDERSCOPE**

The Celestron 8x50 convertible Finderscope is a wide diameter medium power, fully achromatic finderscope that will make it easy for you to locate objects in the night sky. By sighting along the barrel, point the telescope in the direction of the object you want to see. Look into the finderscope and move the whole telescope on both its Dec. and R.A axes until you locate the object in the finderscope. Lock the R.A. and Dec. clamps and then use the slow-motion knobs to center the object in the cross hairs of the finderscope. Then look into the ocular on the Super C8. The object should be in the field of view. Use the slow-motion knobs to center it in the frame.

The finderscope is most useful for finding brighter objects with a star map or for finding dimmer objects by star hopping – starting on a bright object and using it as a sign post for dimmer objects. Your Super C8 setting circles are also very helpful in finding objects. The C5/C8 manual has very explicit instructions on how to use your setting circles. The clear window over the worm gear has a scale which can be used as a vernier in R.A. for even greater accuracy.

## **INSTALLING THE FINDERSCOPE**

In order to install and align your finderscope, you need both a flat head screwdriver and a Phillips head screwdriver. First attach the finderscope bracket to the left side of the telescope by inserting the Phillips head screws through the bracket and into the two drilled and tapped holes on the side of the telescope. The two rings on the bracket should be towards the corrector plate of the tube assembly, not behind the rear cell.

To avoid scratching the finderscope, unscrew the adjusting screws on the ring of the bracket so that they do not extend into the area where the finderscope sits. Slip the finderscope into the first ring of the bracket (the one closest to the front of the telescope) and slip the O-Ring over the finderscope. Slide the O-Ring about one-third the way up the finderscope and fit the finderscope through the rest of the bracket. Slide the O-Ring down under the bracket ring (the one closest to the rear cell). Use the edge of your screwdriver to wedge the O-Ring between the finderscope and the bracket. Tighten the adjusting screws until they press against the finderscope and hold it steady.

For right angle viewing through the finderscope, the star diagonal and the ocular are used. For straight through viewing, unscrew the eyepiece holder, thread on the extension tube (included) and then thread on the eyepiece holder behind it. Slip in the ocular. Focus with the focusing ring on the finderscope for both straight through and right angle viewing.

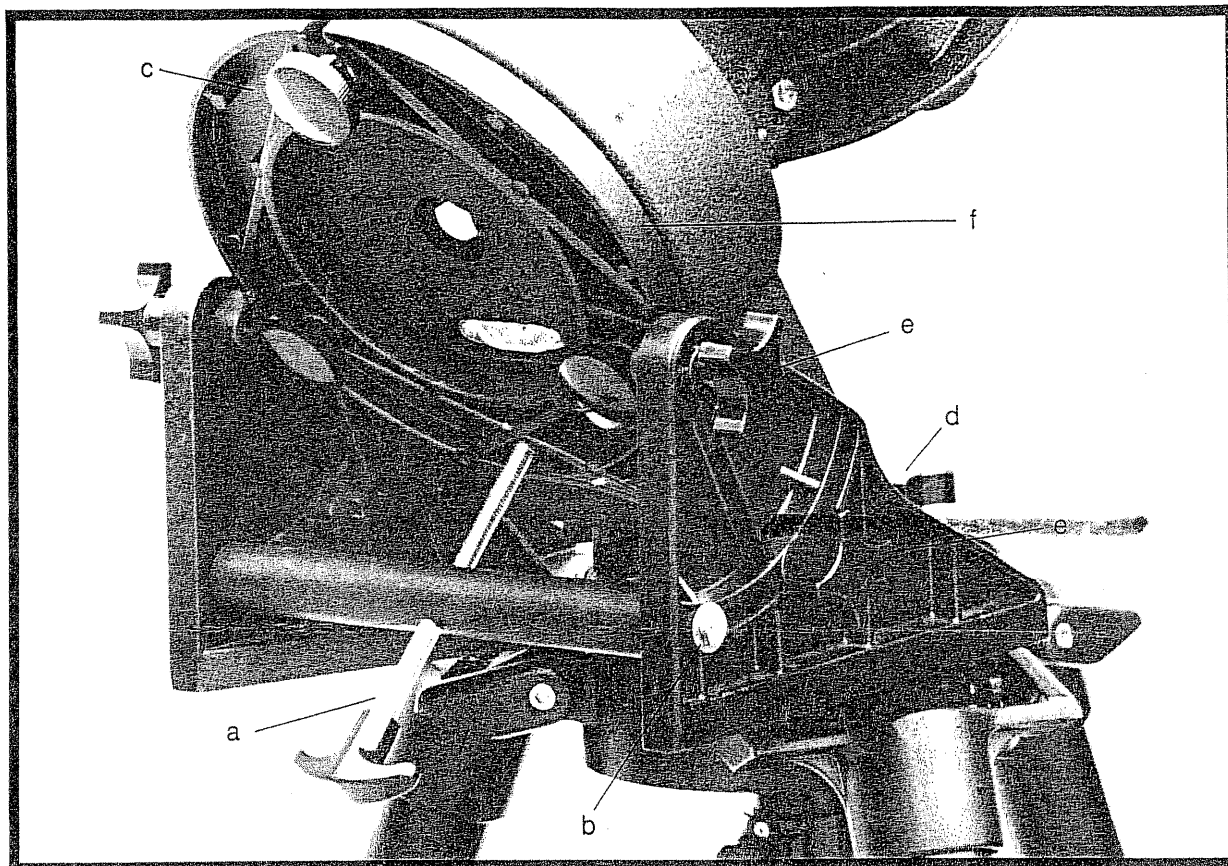
To align your finderscope, point the main telescope at a star or a bright object at least one-half mile away (the further the better). Center the object in the main telescope. Use the three adjusting screws to alter the position of your finderscope until the object you are looking at in the main telescope is centered in the cross hairs of the finderscope. Your finderscope is now aligned.

## **THE EASE OF A NO-TOOL TELESCOPE**

When you get your Super C8 remove the bolts from the sides of the wedge (with a hex or crescent wrench) and replace them with the no-tool bolts. Be sure to save at least two bolts for your latitude adjuster.

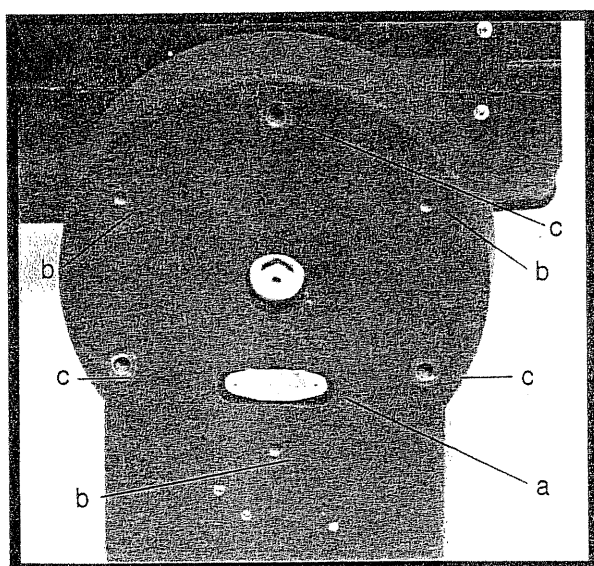
Setting up and dismantling the Super C8 will now be terrifically easy. Three no-tool bolts (hand knobs) attach the wedge to the tripod. Three other hand knobs (with round handles) attach the telescope to the wedge. Put in the first knob (top bolt on the telescope) and slide the telescope into the top (slotted) hole in the wedge. It will hold your telescope onto the wedge while you secure the other bolts.

To attach the latitude adjuster secure the large bar to the bottom of the wedge with two of the bolts you saved from the wedge. They fit right into the tracks that guide the wedge. Tighten them hand-tight and then tilt the telescope, the latitude adjuster, or both until the wedge rests squarely on the long adjuster screw. Tighten the bolts with the wrench. This is the last time you will need tools to set up and break down your Super C8.



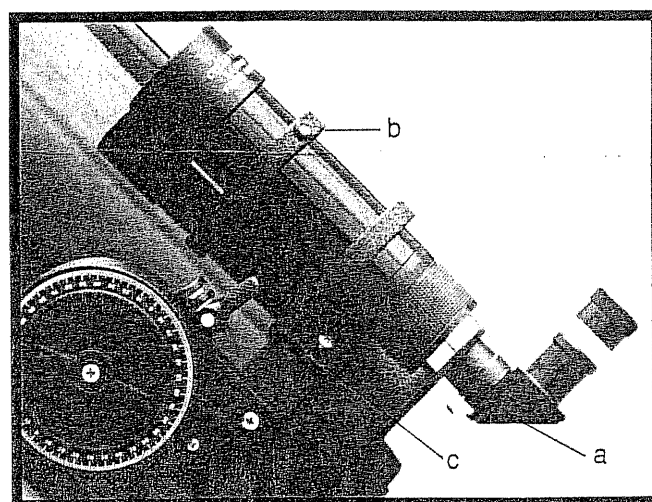
### CORRECT INSTALLATION OF THE DELUXE LATITUDE ADJUSTER

- a) Latitude adjuster cross bar, note the threaded pressure screw presses against the underside of the wedge tilt plate (f).
- b) Bolts to secure the Latitude Adjuster – remove from the wedge where (e) is installed.
- c) Round head bolts that secure the Super C8 telescope to the wedge.
- d) Star-shaped bolts to secure the wedge to the tripod.
- e) Star-shaped ( $\frac{1}{4}$ " - 20) bolts to secure the tilt plate to the side of the wedge (remove the standard hex head bolt first).
- f) Wedge tilt plate.



### BOTTOM OF SUPER C8 DRIVE BASE

- a) Power cord connection.
- b) Thrust pad adjustments (factory adjusted).
- c) Tripod-to-wedge bolt attachments.



### INSTALLED 8x50 FINDERSCOPE

- a) Right-angle mode – note that the extension tube is not used.
- b) The front of the bracket projects away from the eyepiece end of the telescope.
- c) The finderscope bracket attaches to the side of the Super C8's rear cell, not the top center (used for piggyback mounts and counterweight, etc.).

To set your latitude, loosen the hand knobs that hold the wedge's tilt plate and turn the handle on the latitude adjuster. It will change the angle of the tilt on the wedge automatically. Retighten the hand knobs after the latitude is set.

## THE TELESCOPE OF THE FUTURE

The Super C8 is the best all-around and best photographic telescope ever offered by any manufacturer. It is a telescope you can be proud of. One that will offer you years of enjoyment. As your interests and confidence grows you will want to explore what you can do with Celestron Super C8 accessories. An accessory catalog is included with every Super C8 Telescope.

Our suggested basic package is:

The Super C8  
Wedge - 5/8  
Adjustable Tripod - 5/8/90  
10mm Plössl Ocular - 1 1/4"  
~~5mm Plössl Ocular - 1 1/4"~~  
Celestron Sky Maps

Other suggested accessories:

32mm Erfle or 36mm Plössl Ocular - 1 1/4"  
(low power eyepieces)  
17mm Plössl Ocular (intermediate power eyepieces)  
Multiple Ocular Holder  
(holds four eyepieces at once!)

Our optional photographic package includes:

T-Adapter and T-Ring (for your particular brand of 35mm SLR)  
Tele-Extender  
Counterweight Set - 8"  
Off-Axis Guiding System  
Quartz Drive Corrector (single or dual-axis)

Celestron also offers a myriad of other accessories including a Solar Filter, 2-inch Star Diagonal and 2-inch Oculars to further enhance your viewing and photographic pleasure.

## CARE OF THE SUPER C8

- 1) To keep the optics clean we recommend that you blow accumulated dust off the corrector plate with an air bulb. Fingerprints should be cleaned off the corrector within 24 hours to protect the special coatings - use alcohol and water or Celestron's Optics Cleaning Kit.
- 2) To protect the tube finish (black version) you may wax it with an automotive wax.
- 3) Protect the case with a vinyl cleaner such as Armor-All.
- 4) Keep the mount clean with any general purpose cleaner - dust after use and keep a dust cover on it when not in use. For the black version you may cover up any small scratches by using a black marking pen. Touch-up paint is available for \$1.00/1-oz. vial in orange and "trail brown" from the Celestron Repair department.

Congratulations on your purchase of the telescope of the future today.

Do you have questions? If so, please call us toll-free (within the continental U.S.A.) Monday - Friday 8AM - 4PM:  
**1-800-421-1526.** Ask for our Customer Service/Sales Department (Call 328-9560 if you live in the 213 area.)

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