



# CASSINI™ TRACKER

REFRACTOR TELESCOPE SERIES

MODEL #:

#C-60090TR



#C-72080TR



#C-80072TR



COSMO BRANDS INC.  
[WWW.COSMOSOPTICS.COM](http://WWW.COSMOSOPTICS.COM)



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# CASSINI REFRACTOR TELESCOPE OPERATING INSTRUCTIONS

## INTRODUCTION

THIS TELESCOPE HAS BEEN CORRECTED AGAINST CHROMATIC ABERRATION AND PRODUCED TO PRECISE SPECIFICATIONS.

PRIOR TO USING YOUR NEW CASSINI TELESCOPE, PLEASE READ THE FOLLOWING SETUP AND USAGE INSTRUCTIONS. IT IS IMPORTANT TO PROPERLY ASSEMBLE YOUR TELESCOPE IN ORDER TO ALLOW IT TO FUNCTION PROPERLY.

CONSIDER USING THE TELESCOPE FOR EARTH (TERRESTRIAL) VIEWING BEFORE ATTEMPTING TO VIEW ASTRONOMICAL OBJECTS. THIS WILL FAMILIARIZE YOU WITH HOW POWERFUL EACH EYEPIECE WILL BE, AS WELL AS INTRODUCING YOU TO THE FUNCTIONS OF YOUR ACCESSORY LENSES.

DUE TO THE ERECT IMAGE PRISM POSITIONED IN THE FOCUS HOUSING, THE IMAGE YOU SEE WILL ALWAYS BE RIGHT SIDE UP. AND CORRECTED FROM LEFT TO RIGHT.

WE RECOMMEND YOU BEGIN WITH THE LOWEST POWER EYEPIECE (25MM). WHEN USING THE HIGHEST POWER EYEPIECE (10MM), YOUR POWER WILL BE HIGHER, BUT THE IMAGE WILL APPEAR DARKER; THIS IS DUE TO THE BASIC PHYSICAL PROPERTIES OF THE TELESCOPE. THE HIGHER THE POWER YOU USE THE DARKER THE IMAGE WILL APPEAR AND YOUR VIEWING FIELD WILL BE MORE NARROW.

PLEASE BE PATIENT WHEN USING YOUR TELESCOPE. IT IS A VERY SENSITIVE INSTRUMENT THAT IS CAPABLE OF USING HIGH POWERS. HOWEVER, THE MORE POWER YOU USE, THE MORE SENSITIVE THE TELESCOPE BECOMES. AS A RESULT, THE SLIGHTEST MOVEMENT OF THE TELESCOPE COULD CAUSE YOU TO LOSE THE IMAGE YOU HAVE IN YOUR EYEPIECE. PRACTICE WILL ENABLE YOU TO KNOW HOW MUCH MOVEMENT TO EXPECT WITH EACH EYEPIECE AND IT'S CORRESPONDING POWER.



## GETTING THE MOST FROM YOUR TELESCOPE

TAKE THE TIME TO BECOME FAMILIAR WITH YOUR NEW TELESCOPE. LEARN THE NAMES OF THE VARIOUS PARTS, WHERE THEY ARE LOCATED AND THEIR FUNCTION. IT IS THE BEST TO PERFORM THESE FUNCTIONS DURING THE DAY TIME.

WHEN SETTING UP FOR A VIEWING SESSION, PLACE THE TELESCOPE IN AN AREA SHELTERED FROM THE WIND IF POSSIBLE. THE BEST NIGHT TIME VIEWING WILL BE AWAY FROM CITY LIGHT AND WHEN THE ATMOSPHERE IS "STEADY".

WITH A LITTLE PRACTICE YOU WILL LEARN TO JUDGE WHEN VIEWING CONDITIONS ARE GOOD. LOOK FOR THE NIGHTS WHEN THE STARS SHINE BRIGHTLY WITH LITTLE OR NO TWINKLING.

USE LOW POWER TO TAKE ADVANTAGE OF THE WIDER FIELD OF VIEW AND BRIGHTER IMAGE. RESERVE YOUR HIGH POWERS FOR THE NIGHTS WHEN THE VIEWING CONDITIONS ALLOW FOR DETAILED OBSERVATIONS.

**#C-60090TR**



**#C-72080TR**






**#C-80072TR**





## ACCESSORIES

A. FULLY ADJUSTABLE ALUMINUM TRIPOD		ALL MODELS
B. EYEPIECES (DIFFERENT IN EACH P/N TELESCOPE) TAKE C-80072TR FOR EXAMPLE: 25MM = 32X LOWEST POWER/BRIGHTEST IMAGE 10MM PLÖSSL = 80X HIGHER POWER/LESS BRIGHTEST		ALL MODELS
C. 3X BARLOW. USED TO INCREASE THE POWER OF ANY GIVEN EYEPIECE BY 300%. FOR EXAMPLE THE 25MM IS 32X POWER AND WITH THE 3X BARLOW IT IS 96X POWER		C-80072TR C-60090TR
D. ERECT IMAGE PRISM. ALLOWS FOR AN OPTICALLY CORRECT UPRIGHT IMAGE THROUGH YOUR TELESCOPE AT ALL TIMES.		C-80072TR C-60090TR
E. 2X FLIP BARLOW / ERECT IMAGE PRISM.(OPTION) USED TO INCREASE THE POWER OF ANY GIVEN EYEPIECE BY 200%. FOR EXAMPLE THE 25MM IS 29X POWER AND WITH THE 2X BARLOW IT IS 58X POWER. ALLOWS FOR AN OPTICALLY CORRECT UPRIGHT IMAGE THROUGH YOUR TELESCOPE AT ALL TIMES.		C-72080TR
F. ELECTRONIC MARS-EYE FINDER ALLOWS FOR EASY SPOTTING OF OBJECTS.		ALL MODELS
G. TRACKER MOUNT		ALL MODELS

NOTE: SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.



## ACCESSORIES

H. VERTICAL ADJUSTMENT.

H 	ALL MODELS
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I. HORIZONTAL ADJUSTMENT.

I 	ALL MODELS
--	---------------

J. CASSINI CD-ROM  
STELLARIUM  
FROM ANY LOCATION YOU CAN SEE THE  
SKY AS IT APPEARS AT ANY TIME OF DAY,  
OR EVEN IN THE FUTURE.

J 	ALL MODELS
--	---------------

NOTE: SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.



# CASSINI™ TRACKER

## REFRACTOR TELESCOPE SERIES ASSEMBLY INSTRUCTIONS

CAUTION: NEVER POINT YOUR TELESCOPE AT THE SUN. VIEWING THE SUN WITH THIS TELESCOPE OR EVEN THE UNAIDED EYE CAN RESULT IN BLINDNESS OR OTHER SERIOUS EYE DAMAGE.

1. REMOVE PRE-ASSEMBLED TRIPOD

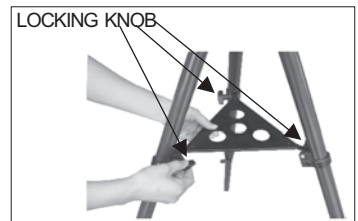
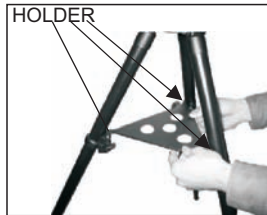
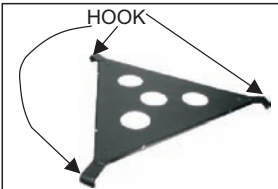
2. ADJUST TRIPOD TO PROPER HEIGHT BY LOOSENING, ADJUSTING AND TIGHTENING THE LOCKING KNOBS.



3. ATTACH TRACKER MOUNT TO TRIPOD. (AS SHOWN) REMOVE CONNECTING KNOB FROM BOTTOM OF THE MOUNT. PLACE THE MOUNT ON TOP OF THE TRIPOD AND RECONNECT THE KNOB.



4. ATTACH ACCESSORY TRAY



### ACCESSORY TRAY

- (1) SPREAD TRIPOD LEGS APART SO THE TRAY WILL FIT UNDERNEATH
- (2) PLACE THE TRAY'S HOOK OVER THE HOLDER'S METAL ROD AND PUSH DOWN
- (3) TIGHTEN THE HOLDER'S LOCKING KNOB TO HOLD THE ACCESSORY TRAY IN PLACE

5. ATTACH THE TELESCOPE TO THE TRACKER MOUNT. LOOSEN CONNECTING TRACK KNOB AT THE TOP OF THE TRACKER MOUNTING BRACKET. SLIDE THE TELESCOPE INTO AND CENTER IT IN THE MOUNTING BRACKET. TIGHTEN THE CONNECTING KNOB.





# CASSINI™ TRACKER REFRACTOR TELESCOPE SERIES

6. REMOVE ELECTRONIC MARS-EYE FINDER.

7. USE THE TWO THUMB SCREWS TO POSITION THE ELECTRONIC MARS-EYE FINDER ON THE TELESCOPE TUBE. FOR ADDITIONAL HELP SEE THE PAGE IN YOUR INSTRUCTION BOOK FOR MARS-EYE ELECTRONIC FINDER MOUNTING AND ALIGNMENT.



8. ATTACH VERTICAL ADJUSTMENT TO TRACKER MOUNT.



9. ATTACH HORIZONTAL ADJUSTMENT TO TRACKER MOUNT.







# FEATURES OF TRACKER REFRACTOR TELESCOPE C-60090TR





# FEATURES OF TRACKER REFRACTOR TELESCOPE C-72080TR





# FEATURES OF TRACKER REFRACTOR TELESCOPE C-80072TR





## REFRACTING TELESCOPE

MODEL	MODEL SPECIFICATION	EYEPIECES	BARLOW	FOCUSER	ERECT IMAGE PRISM
C-60090TR	600×90MM	KF25MM PL10MM	3x BARLOW	1.25 INCH METAL FOCUSER	PRISM
C-72080TR	720×80MM	KF25MM PL10MM	2X FLIP BARLOW / ERECT IMAGE PRISM	1.25 INCH METAL FOCUSER	PRISM
C-80072TR	800×72MM	KF25MM PL10MM	3x BARLOW	1.25 INCH METAL FOCUSER	PRISM

## EYEPIECE POWER TABLE

MODEL#	10MM EYEPIECE	W/2X BARLOW LENS	25MM EYEPIECE	W/3X BARLOW LENS
C-60090TR	60X	NA	24X	72X
C-72080TR	72X	144X	29X	NA
C-80072TR	80X	NA	32X	96X

# HOW TO USE EYEPIECES & ACCESSORIES

PROPER PLACEMENT OF THE EYEPIECES AND ACCESSORIES IS IMPORTANT IN ORDER TO ASSURE EASY OPERATIONS AND CLEAR VIEWING.

PLEASE USE THE ACCESSORIES IN THE FOLLOWING ORDER. BY DOING THIS, YOU WILL BETTER UNDERSTAND THE IMPACT EACH INDIVIDUAL ACCESSORY HAS ON THE FUNCTION OF YOUR TELESCOPE.

## 1) FOCUSING TUBE

TURN FOCUSING WHEELS TOWARD THE TELESCOPE UNTIL IT WILL NOT GO FURTHER. TO FOCUS BEGIN TO TURN THE FOCUSING KNOBS TOWARD YOUR BODY, SLOWLY, UNTIL THE IMAGE IS CLEAR. NOTE: YOU MUST HAVE AN EYEPIECE AND DIAGONAL PRISM INSERTED IN ORDER TO VIEW IMAGE.



## 2) DIAGONAL PRISM

INSERT THE DIAGONAL PRISM INTO THE FOCUSING HOUSING.

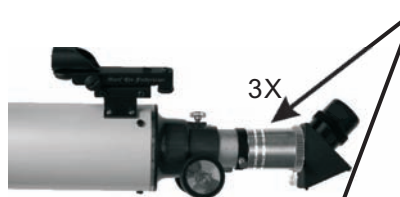
## 3) EYEPIECE INSERTION

AFTER THE DIAGONAL PRISM IS INSERTED, PLACE THE EYEPIECE (25MM) INTO THE DIAGONAL PRISM. THE LOWER THE NUMBER ON THE EYEPIECE, THE HIGHER THE POWER YOUR TELESCOPE WILL BE USING. PLUS, YOU DECREASE THE FIELD OF VIEW AND THE BRIGHTNESS OF YOUR IMAGE. WHEN USING EYEPIECES, WE SUGGEST ALWAYS STARTING WITH THE LOWEST POWER AND THEN GOING UP.



## 4) BARLOW LENS

THE BARLOW LENS IS USED TO ACHIEVE THE MAXIMUM POWER FROM YOUR TELESCOPE. FIRST, REMOVE THE DIAGONAL PRISM FROM THE FOCUSING TUBE AND INSERT THE BARLOW LENS DIRECTLY INTO THE FOCUSING TUBE. YOU WILL HAVE TO READJUST YOUR FOCUSING DUE TO THE FACT THAT YOU HAVE INCREASED/DECREASED THE POWER OF YOUR TELESCOPE DRAMATICALLY.



**G-60090TR**

**G-80072TR**



**G-72080TR**



## MARS-EYE ELECTRONIC FINDER MOUNTING & ALIGNMENT



[WWW.CASSINITELESCOPES.COM/CVIDEO/MARSEYE01\\_VIDEO.HTML](http://WWW.CASSINITELESCOPES.COM/CVIDEO/MARSEYE01_VIDEO.HTML)

### TO MOUNT:

- 1) REMOVE MARS-EYE ELECTRONIC FINDER FROM BOX.
- 2) LOOSEN THUMB SCREWS ON SIDE OF FINDER AND SLIDE FINDER ONTO DOVETAIL MOUNT LOCATED AT TOP OF MAIN TELESCOPE TUBE.
- 3) TIGHTEN THUMB SCREWS.

### TO CHECK ALIGNMENT WITH MAIN TELESCOPE: (IMPORTANT!)

- 1) THE MARS-EYE ELECTRONIC FINDER IS NOT PRE-SET AT FACTORY. THE FOLLOWING WILL ALLOW YOU TO ADJUST THE ALIGNMENT.
- 2) DURING THE DAY LIGHT HOURS, AIM THE MAIN TELESCOPE AT AN OBJECT AT LEAST 1/4 MILE OR MORE IN THE DISTANCE AND BRING IT INTO FOCUS.(VERY IMPORTANT)
- 3) ONCE YOU HAVE CENTERED THE REFERENCE ITEM IN THE MAIN TUBE, TIGHTEN ALL KNOBS AND ADJUSTMENTS TO PREVENT ANY MOVEMENT.
- 4) REMOVE CIRCULAR BATTERY SAVER LOCATED BENEATH FRONT OF FINDER (BE SURE. TO SAVE AND REPLACE THE BATTERY SAVER WHEN NOT IN USE.)
- 5) TURN FINDER ON BY SLIDING ON/OFF SWITCH FORWARD. ON/OFF SWITCH IS LOCATED ON THE RIGHT SIDE OF THE FINDER.



- 6) LOOK THROUGH THE FINDER AND LOCATE THE RED DOT.
- 7) IF THE OBJECT IN THE MARS-EYE FINDER IS NOT THE OBJECT YOU SEE THROUGH THE MAIN TELESCOPE TUBE, ADJUSTMENT IS REQUIRED.
- 8) TO MOVE THE RED DOT UP AND DOWN, SIMPLY TURN THE ELEVATION SCREW LOCATED ON THE REAR BOTTOM OF THE FINDER TO HEIGHT REQUIRED.
- 9) TO MOVE THE RED DOT LEFT AND RIGHT, SIMPLY TURN THE WINDAGE SCREW LOCATED AT THE FRONT LEFT SIDE OF THE FINDER TO THE PROPER POSITION.
- 10) THESE ADJUSTMENTS WILL ALLOW YOU TO POSITION THE RED DOT ON THE SAME OBJECT CENTERED IN THE MAIN TELESCOPE.





# CASSINI TRACKER MOUNT LOCATING OBJECT

BEFORE LOCATING NEW OBJECT, RE-ALIGN YOUR VERTICAL AXIS



- A. LOOSEN VERTICAL LOCKING KNOB ENOUGH TO WHERE TELESCOPE CAN BE MANUALLY ADJUSTED UP AND DOWN.



- B. LOOSEN AZIMUTH LOCKING KNOB ENOUGH TO WHERE TELESCOPE CAN BE MANUALLY ADJUSTED LEFT AND RIGHT.
- C. POINT YOUR TELESCOPE IN THE DIRECTION OF YOUR TARGET OBJECT, ZEROING IN USING THE MARS EYE RED DOT FINDERSCOPE. (SEE PAGE 14)  
ONCE OBJECT IS LOCATED THROUGH THE MARS EYE FINDERSCOPE, TIGHTEN BOTH THE VERTICAL LOCKING KNOB AND AZIMUTH LOCKING KNOB FIRMLY.  
DO NOT OVER TIGHTEN.



## CASSINI TRACKER MOUNT LOCATING OBJECT

D. USING THE LOWEST POWER EYEPIECE (25 MM), LOOK THROUGH THE TELESCOPE TO SEE YOUR TARGET OBJECT.



E. IF THE OBJECT IS NOT CENTERED IN THE EYEPIECE, USE THE TOP FLEX CABLE (MICRO VERTICAL ADJUSTMENT ) FOR PRECISE UP AND DOWN MOVEMENTS, AND THE BOTTOM FLEX CABLE (MICRO HORIZONTAL ADJUSTMENT) FOR PRECISE LEFT AND RIGHT MOVEMENTS TO CENTER YOUR TARGET OBJECT IN THE EYEPIECE.

REMEMBER AS THE EARTH ROTATES THE OBJECT WILL DRIFT OUT OF VIEW IN THE EYEPIECE. USE THE TOP AND BOTTOM FLEX CABLES TO MAKE SIMULTANEOUS UP/DOWN AND LEFT/ RIGHT MICRO ADJUSTMENTS TO KEEP YOUR TARGET OBJECT CENTERED IN YOUR EYEPIECE.





# CASSINI TRACKER MOUNT LOCATING OBJECT

F. AS YOU MAKE UP/DOWN (VERTICAL) MICRO ADJUSTMENTS, BE CAREFUL TO MAKE SURE THE VERTICAL ADJUSTMENT GUIDE LINES DO NOT EXCEED THEIR PARAMETERS.

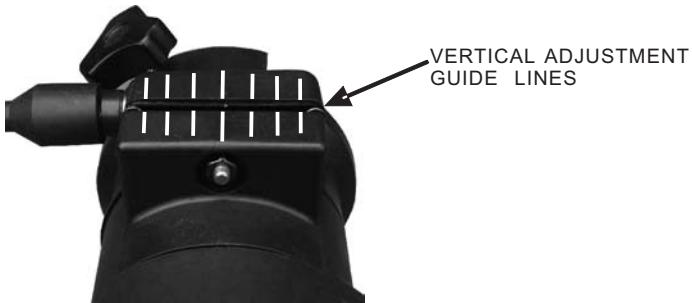


FIGURE 1.

G. WHEN THE GUIDE LINES APPEAR AS IN THE PICTURE BELOW, (FIGURE 2) RE-SET THE VERTICAL ADJUSTMENT USING THE TOP FLEX CABLE (MICRO VERTICAL ADJUSTMENT) TO MATCH FIGURE 1, THEN REPEAT STEP A. THROUGH STEP E.



FIGURE 2.



**C A S S I N I <sup>TM</sup>**

**CASSINI <sup>TM</sup> Limited One Year Warranty**

We guarantee to replace or, at our option, repair any products or parts thereof which are found defective in material or workmanship during the first year from date of purchase. Our obligation with respect to such products or parts shall be limited to replacement or repair. In no event shall we be liable for consequential or special damages or for transportation, installation, adjustment, or other expenses which may arise in connection with such product or parts. The customer shall be responsible for all costs of transportation and insurance, both to and from CASSINI/COSMO BRANDS INC., and shall be required to prepay such costs. No expenses, warranties and implied warranties, whether or not merchantability of fitness for any particular use or otherwise (except as to title) other than these expressly set forth above which are made in writing and signed by executive officer of our corporation.

**NO LIABILITY FOR CONSEQUENTIAL DAMAGES, IN NO EVENT SHALL THE MANUFACTURER OR ITS SUPPLIERS BE LIABLE FOR ANY DAMAGES WHATSOEVER. BECAUSE SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF THE POSSIBILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.**

**CASSINI <sup>TM</sup>**

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**IF YOU NEED ANY FURTHER HELP WITH YOUR CASSINI TELESCOPE  
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