

FS-80Z

Galileo®



1564 - 1642

Instructions

GALILEO FS-80Z

OPERATING INSTRUCTIONS

INTRODUCTION

THIS TELESCOPE HAS BEEN PRODUCED TO PRECISE SPECIFICATIONS.

PRIOR TO USING YOUR NEW GALILEO 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.

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

THE IMAGE YOU SEE WILL BE UPSIDE DOWN AND BACKWARD. THIS IS DUE TO THE FACT THAT YOUR TELESCOPE IS AN ASTRONOMICAL TELESCOPE AND HAS BEEN MANUFACTURED FOR ASTRONOMICAL OBSERVATIONS. IN ASTRONOMICAL VIEWING, THERE IS NO UP OR DOWN, NO RIGHT OR LEFT.

FOR TERRESTRIAL VIEWING WE HAVE ADDED AN ERECTING LENS SO THAT WHEN YOU VIEW OBJECTS ON THE EARTH YOUR IMAGE WILL BE RIGHT SIDE UP.

WE RECOMMEND YOU BEGIN WITH THE LOWEST POWER EYEPIECE, 20MM WHEN USING YOUR TELESCOPE. AS YOU INCREASE THE POWER TO 6MM 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 POWER. 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.

ACCESSORIES

A) MARS-EYE ELECTRONIC FINDER:

USED TO LOCATE OBJECTS PRIOR TO USING MAIN TELESCOPE. PLEASE NOTE YOU MUST ALIGN THE FINDER WITH THE MAIN TUBE PRIOR TO INITIAL ASTRONOMICAL OR TERRESTRIAL USE.



B) 3X BARLOW:

USED TO INCREASE THE POWER OF ANY GIVEN EYEPIECE BY 300%. EXAMPLE - 20MM EYEPIECE SEPARATELY PROVIDES 40X POWER, WHEN USED WITH THE 3X BARLOW, YOU NOW HAVE 120X POWER.



C) EYEPIECES:

6MM EYEPIECE = 133X (399X WITH 3X BARLOW)

MOST POWERFUL - LEAST LIGHT

6.8 TO 16MM ZOOM (50X TO 118X)

354X W/3X BARLOW

20MM EYEPIECE = 40X (120X WITH 3X BARLOW)

LEAST POWERFUL - MOST LIGHT



D) 1.5X ERECTING LENS:

USED TO CONVERT THE UPSIDE DOWN, ASTRONOMICAL IMAGE TO A RIGHT SIDE UP IMAGE. USE AS SHOWN IN PAGE 7&8



E) HELICAL RACK & PINION FOCUSING.
ALLOWS FOR PRECISE FOCUSING.



F) STELLARIUM CD-ROM



NOTE: SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

FS-80Z TELESCOPE ASSEMBLY INSTRUCTIONS

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

- 1 REMOVE ALL PARTS FROM BOX AND IDENTIFY THEM.
TELESCOPE W/MOUNT ATTACHED
TRIPOD(PREASSEMBLED)
MARS-EYE FINDER
EYEPIECES(6MM + 20MM + 6.8 TO 16MM ZOOM)
1.5X ERECTING LENS
3X BARLOW LENS
ACCESSORY TRAY
CD-ROM

2. EXTEND TRIPOD LEGS EQUALLY AND TIGHTEN LOCKING KNOBS.



3. ATTACH TELESCOPE + MOUNT TO TRIPOD AS SHOWN.
(DO NOT OVER TIGHTEN)



NOTE : TENSION SPRING & WASHER
LOCATED HERE



4. ATTACH ACCESSORY TRAY (AS SHOWN).



5. LOOSEN SCREW ON MARS-EYE FINDER AND SLIDE ONTO BRACKET. TIGHTEN ATTACHMENT SCREWS. (PLEASE SEE FURTHER INSTRUCTIONS ON MARS'EYE FINDER).



6. REMOVE CAPS WHEN TELESCOPE IS IN USE, AND REPLACE WHEN NOT IN USE. THIS WILL KEEP THE TELESCOPE'S OPTICS CLEAN.



7. THE COLLIMATION SPOT ON THE PRIMARY MIRROR IS FOR THE OPTICAL ALIGNMENT OF THE TELESCOPE, AND IS NOT A DEFECT.



Collimating your Galileo® Reflector

Reflecting telescopes can come out of alignment due to shipping or a sudden movement. A simple collimation procedure will bring your instrument back into an optimum viewing condition.

Step 1 - The diagonal mirror, (secondary) which is the small elliptical mirror that you see in the focusing tube, it must be centered in this tube. See fig.1 below.

Step 2 - Adjust the primary mirror (large mirror at the back of the telescope tube) with the three adjusting screws (Silver Thumb Screws) so the image you see in the focusing tube looks like fig. 2.

INCORRECT

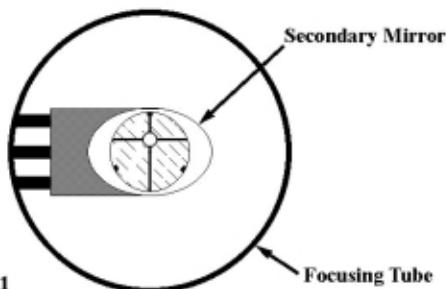


fig. 1

CORRECT

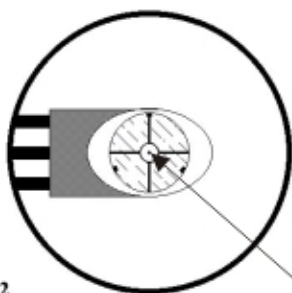


fig. 2

Step 3 - Once you have achieved collimation (like in fig.2), lock the primary mirror in place using the three Phillips head screws next to the Correct three adjusting thumb screws.



COLLIMATION DOT
THE COLLIMATION DOT MUST BE CENTERED
IN THE SECONDARY MIRROR TO ACHIEVE
PRECISE ALIGNMENT.



HOW TO USE EYEPIECES & ACCESSORIES

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

PLEASE CONSIDER USING YOUR 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 GO NO FURTHER. TO FOCUS BEGIN TO TURN THE FOCUSING KNOBS TOWARD YOUR BODY, SLOWLY, UNTIL THE IMAGE IS CLEAR. NOTE: YOU MUST HAVE AN EYEPIECE INSERTED IN ORDER TO VIEW IMAGE. PLEASE READ FURTHER.



2. EYEPIECE INSERTION - INSERT AN EYEPIECE INTO THE RECEIVING END OF THE FOCUSING TUBE. WE SUGGEST YOU ALWAYS BEGIN WITH THE LOWEST POWER EYEPIECE (20MM). THE LOWER THE NUMBER ON THE EYEPIECE, THE HIGHER THE POWER YOUR TELESCOPE WILL BE USING. ALSO AS YOU INCREASE YOUR POWER YOU WILL DECREASE THE FIELD OF VIEW AND THE BRIGHTNESS OF YOUR TELESCOPE. WE SUGGEST YOU ALWAYS USE THE LOWEST POWER REQUIRED TO VIEW YOUR SUBJECT.



3. BARLOW LENS - THE BARLOW LENS IS USED TO ACHIEVE THE MAXIMUM POWER FROM YOUR TELESCOPE. INSERT THE BARLOW DIRECTLY INTO THE FOCUSING HOUSING, THEN INSERT AN EYEPIECE INTO THE RECEIVING END OF YOUR BARLOW LENS. REMEMBER YOU WILL HAVE TO READJUST YOUR FOCUSING DUE TO THE FACT THAT YOU HAVE INCREASED THE POWER OF YOUR TELESCOPE.



4. 1.5X ERECTING LENS - IF YOU ARE CURRENTLY USING THE BARLOW LENS, REMOVE IT BEFORE INSERTING THE ERECTING LENS. INSERT THE ERECTING LENS DIRECTLY INTO THE FOCUSING TUBE, THEN PLACE THE EYEPIECE INTO THE RECEIVING END OF THE ERECTING LENS.




MARS-EYE ELECTRONIC FINDER MOUNTING & ALIGNMENT

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.

USING THE BARLOW LENS

AS STATED EARLIER IN THE INSTRUCTIONS, THE BARLOW LENS INCREASES THE POWER OF THE EYEPIECES BY 3 TIMES.

TO USE SIMPLY INSERT THE BARLOW LENS INTO THE MAIN FOCUSING TUBE , THEN PUT THE DESIRED EYEPIECE INTO THE RECEIVING END OF THE BARLOW LENS

PLEASE REMEMBER, THE HIGHER THE POWER YOU USE THE DARKER THE IMAGE WILL APPEAR.

POWER CHART

EYEPIECE	POWER	POWER WITH 3 X BARLOW
6MM	133X	399X
6.8MM TO 16MM ZOOM	50X TO 118X	354X
20MM	40X	120X

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 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 HIGHER POWERS FOR THOSE NIGHTS WHEN VIEWING CONDITIONS ALLOW FOR DETAILED OBSERVATIONS.

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Galileo®

COSMO BRANDS INC.

21230 SW 246th ST. REDLAND FL 33031 USA

www.cosmosoptics.com

**IF YOU NEED ANY FURTHER HELP WITH YOUR GALILEO TELESCOPE
PLEASE E-MAIL US AT CUSTOMERSERVICE@COSMOOPTICS.COM**

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