

FS-90

Galileo®



1564 - 1642

Instructions

# GALILEO FS-90 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 6.8MM (ZOOM) 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 ITS 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 PROVIDE 40X  
POWER, WHEN USED WITH THE 3X BARLOW, YOU NOW HAVE  
120X POWER.



- C) MULTIPLE OCULAR HOLDER



- D) EYEPIECES:  
6.8 TO 16MM ZOOM (50X TO 118X)  
354X W/3X BARLOW  
MOST POWERFUL - LEAST LIGHT  
20MM EYEPIECE = 40X ( 120X WITH 3X BARLOW )  
LEAST POWERFUL - MOST LIGHT



- E) 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

- F) HELICAL RACK & PINION FOCUSING.  
ALLOWS FOR PRECISE FOCUSING.



- G) GALILEO TRILOGY CD-ROM SET  
PLANETARIUM  
FROM ANY LOCATION YOU CAN SEE THE SKY AS IT APPEARS AT  
ANY TIME OF DAY, OR EVEN IN THE FUTURE, YOU CAN LEARN  
ASTRONOMICAL FACTS WITH NARRATED PHOTOGRAPHS FROM THE  
HUBBLE SPACE TELESCOPE.  
LEARN HOW TO USE YOUR TELESCOPE VIDEO.  
BRITANNICA- TOUCH THE SKY, TOUCH THE UNIVERSE

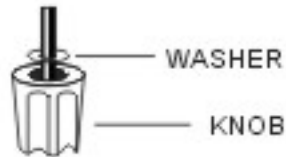


## FS-90 TELESCOPE ASSEMBLY INSTRUCTIONS

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(20MM + 6.8 TO 16MM ZOOM)  
1.5 X ERRECTING LENS  
3X BARLOW LENS  
MULTIPLE OCULAR HOLDER  
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. TIGHTEN LOCKING KNOB (AS SHOWN).



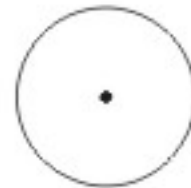
5. LOOSEN SCREW ON MARS-EYE FINDER AND SLIDE ONTO BRACKET. TIGHTEN ATTACHMENT SCREWS. ( PLEASE SEE FURTHER INSTRUCTIONS ON MARSEYE FINDER).



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.





## 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.

# Multiple Ocular Holder

**Your New FS-Series Telescope comes equipped with the 1.25" Multiple Ocular Holder.**

**Below are the proper methods of installing the MOH into the telescope using the Eyepieces, 3x Barlow & 1.5x Image Erector:**

## **1. Eyepieces only with MOH**



## **2. Eyepieces & 3x Barlow with MOH**



## **3. Eyepieces & 1.5x Image Erector with MOH**



**Note: The Zoom Eyepiece is only placed into the shortest holder to be used correctly.**

## 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 IN TO 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
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.

### **Galileo 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, F.O.B. Miami, and 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. A \$20.00 fee to cover postage and handling is required with the return of the product. No expenses, warranties and implied warranties, whether or not merchantability of fitness for any particular use or otherwise (except as to title) other than those 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.

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