

# Vixen®

## Instruction Manual for FL55SS

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## ● PREFACE

**Thank you very much for your purchase of a Vixen astronomical telescope.**

Thank you very much for your purchase of a Vixen astronomical telescope.

This manual applies to FL55SS refracting telescope. You may occasionally find descriptions in the text not relevant to your model. Read instructions for your mount along with this manual if you purchase the telescope as a complete package.

## ● WARNING

- ⊗ **Never look directly at the sun with the telescope or its finder scope or eyepiece. Permanent and irreversible eye damage may result.**

## ● CAUTION

- ⊗ **Do not leave the optical tube uncapped in the daytime. Sunlight passing through the telescope or finder scope may cause a fire.**
- ⊗ **Do not use the product while moving or walking, injuries could result from a collision with objects or from stumbling or falling.**
- ⊗ **Keep small caps, plastic bags or plastic packing materials away from children. These may cause a danger of swallowing or suffocation.**

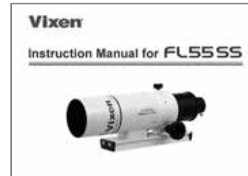
## ● HANDLING AND STORAGE

- ⊗ Do not leave the product inside a car in bright sunshine, or in other hot places. Keep away strong heat source away from the product.
- ⊗ When cleaning, do not use solvents such as paint thinner or similar products.
- ⊗ Do not expose the product to rain, water, dirt or sand.
- ⊗ Avoid touching any lens surfaces directly with your hands. In case a lens becomes dirty with fingerprints or general smears, gently wipe it using a commercially available lens cleaner and lens cleaning paper or cloth, or consult your local Vixen dealer.
- ⊗ Blow off dust on lenses using a commercially available blower brush.
- ⊗ For storage, keep the product in a dry place and do not expose to direct sunlight.

# CONTENTS

The FL55SS shipping box contains the items listed below. Check if all the items are included.

1	FL55SS Optical Tube	①
1	Extension Tube VC	②
1	Allen wrench of 5mm on a side	③
1	Dovetail Slide Bar M (Already attached)	④
2	M4X12mm screws for Finder Bracket Shoe	⑤
1	Instruction Manual (This booklet)	⑥



⑥ Instruction Manual (This booklet)

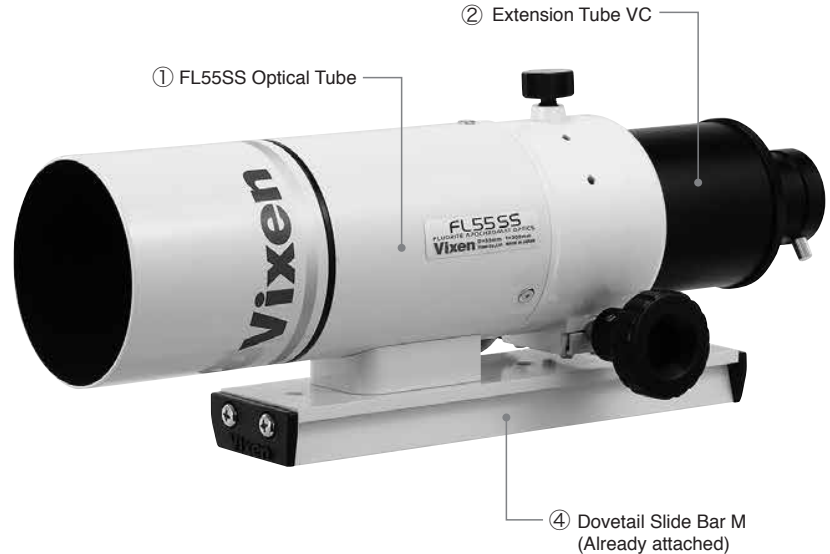
② Extension Tube VC



③ Allen wrench of 5mm on a side



⑤ M4X12mm screws for Finder Bracket Shoe

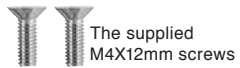


# NAME OF EACH PART

**Dew Shield**  
It avoids generating ghost from surrounding lights.

**Drawtube Lock Screw**  
It is used to hold the drawtube.

**M4X12mm screws for Finder Bracket Shoe**  
These screws are used to attach a finder bracket shoe sold separately. Be sure to use the M4x12mm screws instead of the ones originally supplied to the finder bracket shoe.



**Objective Lens (Inside)**

**Focus Knob**  
Drawing in or out the drawtube to focus. An optional Dual Speed Focuser is available.



**Eyepiece Adapter 31.7mm**  
Insert an eyepiece with 31.7mm barrel sold separately.

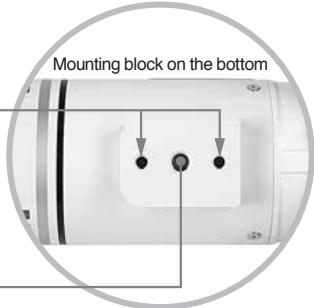
**Eyepiece Setscrew**

**Dovetail Slide Bar M**  
It fits directly to the Dovetail Mounting Block.

**M60 to 43AD Ring**  
It is attached to the Extension Tube VC to convert the 60mm drawtube to 43mm in diameter.

**Extension Tube VC**  
It is attached to the 60mm drawtube in diameter.

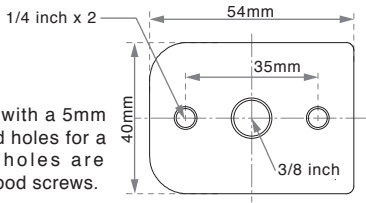
**Threaded holes for 1/4" camera-tripod screw**



**A threaded hole for 3/8" camera-tripod screw**

**Attaching the FL55SS to a commercially available camera tripod.**

Removing the Dovetail Slide Bar M with a 5mm Allen wrench will reveal the threaded holes for a camera tripod. The threaded holes are applicable to 1/4" and 3/8" camera-tripod screws.

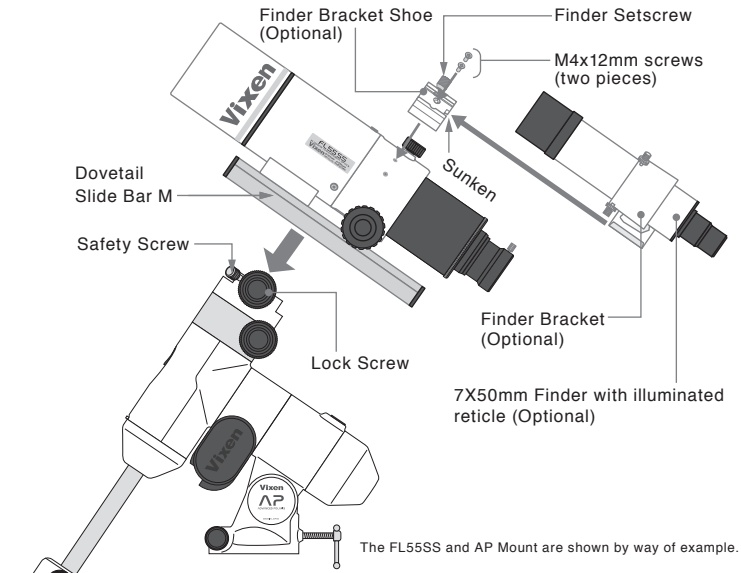


# SETTING UP THE TELESCOPE

## Attaching the Optical Tube to a Mount

Refer to your mount instructions along with this manual. The AP Mount is shown by way of example.

- 1 Loosen both the dovetail plate lock screw and safety screw until the tips of these screws no longer extended into the inner part of the dovetail block.
- 2 Slide the dovetail slide bar M on the optical tube into the dovetail mounting block as shown in the figure and tighten the dovetail lock screw until snug. First tighten the dovetail lock screw, and then tighten the small chrome safety screw.



## Attaching the Finder Bracket Shoe (Optional)

Be sure to use the two M4x12mm screws included in the package of the FL55SS to attach the finder bracket shoe that is sold separately.

**Caution:** Never use the screws that are provided the finder bracket shoe. The long screws will exceed the allowable depth of the thread and this could result in damage to the drawtube.

Place the finder bracket shoe so that the sunken part on the attachment surface of the finder bracket shoe faces the eyepiece side of the FL55SS. Securely tighten the screws with a Philipps head screw driver.



## Finder Scope

The Finder bracket shoe is available for the 50mm Finder Bracket II or XY Red Dot Finder II.

# VISUAL OBSERVING

## Eyepiece

The telescope requires an eyepiece to view images. The eyepiece determines magnification of your telescope.

The telescope may come with the eyepiece as standard accessory when you purchase it as a package including a mount.

## Magnification of the Telescope

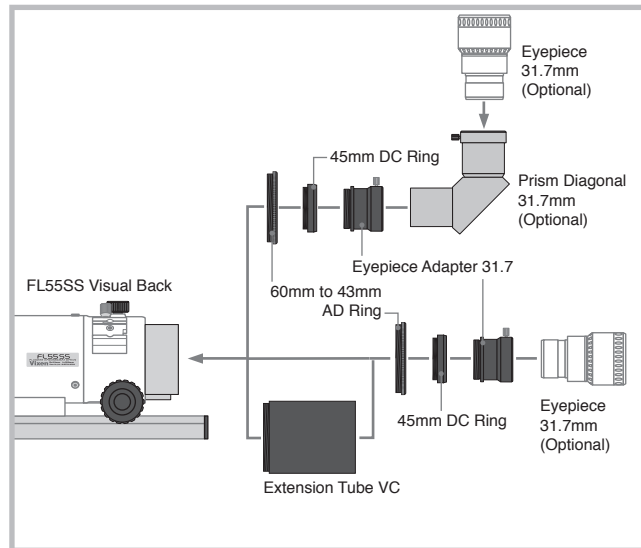
Dividing the focal length of the telescope by the focal length of the eyepiece gives the magnification.

Example: Using the FL55SS with SLV20mm or SLV5mm eyepiece.

Eyepiece	Telescope's focal length	Telescope's focal length	Magnification
SLV20mm	300mm	20mm	15x
SLV5mm	300mm	5mm	60x

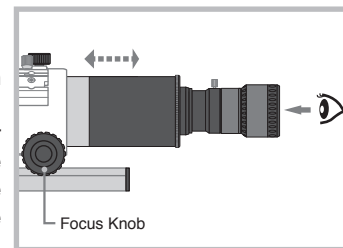
Begin with an eyepiece with long focal length (large number in millimeters). When using an eyepiece with short focal length, the image becomes dimmer and the range of field of view becomes narrower. Also, the range of sharp focus becomes smaller.

## Visual Observing Configuration



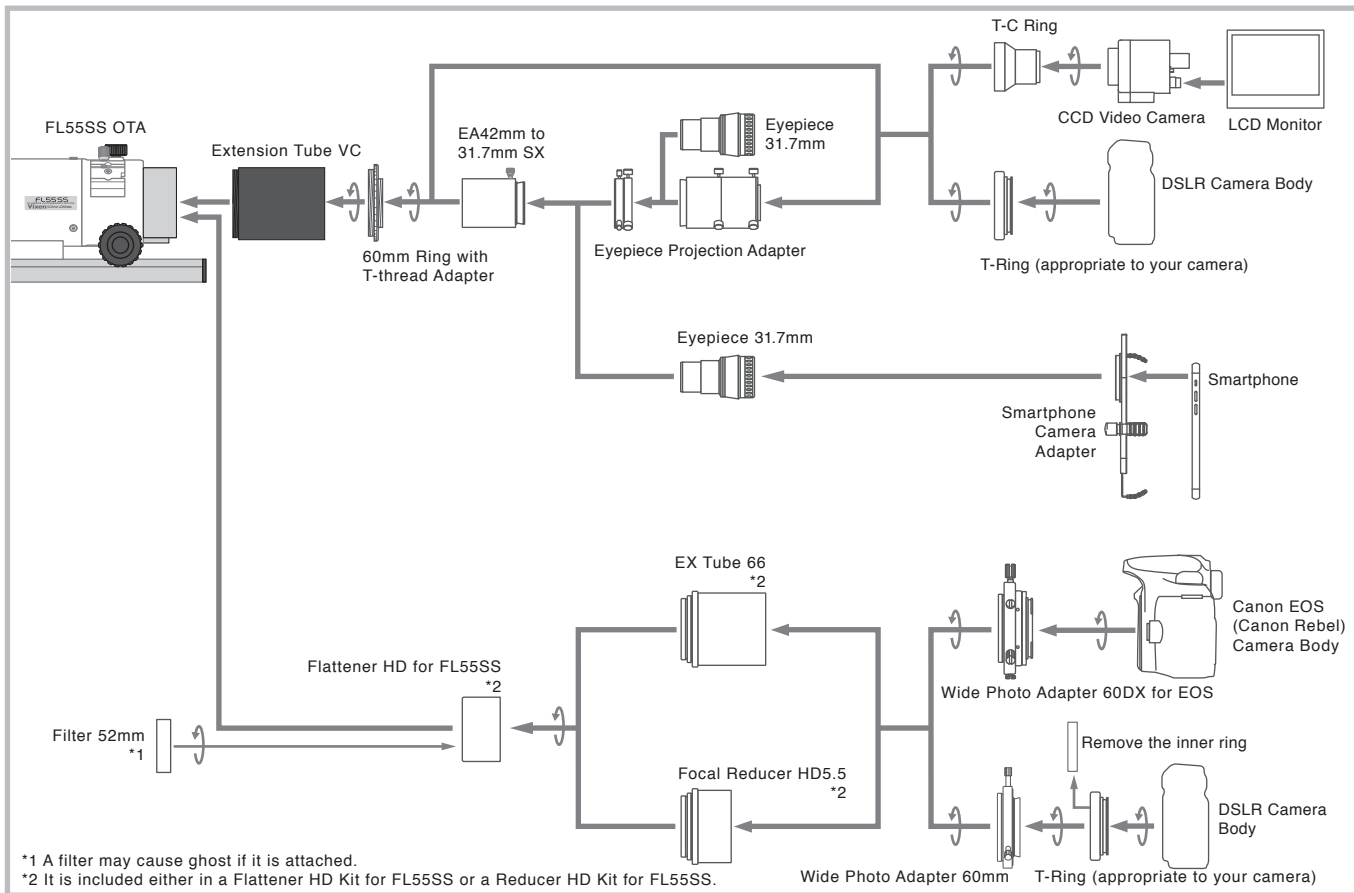
## Focusing the Telescope

Look through the FL55SS with an eyepiece of low magnification. Turn the focus knob forward or backward as shown in the figure until images in the eyepiece's field of view come to focus clearly.



## Photographic Configuration

Some of the optional accessories shown in this diagram will be needed if you take pictures with a DSLR camera, a compact camera or a CCD video camera.



## Specifications

	Model	FL55SS
Objective Lens	Objective Lens	Fluorite apochromatic lens
	Lens coatings	Multi-coated
	Effective Aperture	55mm
	Focal Length	300mm
	Focal Ratio	f/5.5
	Light Gathering Power	62X unaided eye
	Resolving Power	2.11 arc sec.
	Limiting Magnitude	10.5
Focuser	Focuser Design	Rack-and-pinion focuser with drawtube lock screw
	Threads	60mm, 43mm and 36.4mm
	Push-fit	31.7mm
	Optical Tube Length	282mm
Dimensions and Weights	Outer Diameter	80mm
	Weight	1.5 kgs / 3.3 lbs
Accessories	Dovetail Slide Bar M, Extension Tube VC, M4X12mm screws for attaching an optional finder bracket shoe and 5mm Allen wrench	