

## FlipR™

- Used to invert the upside-down image created by the SFX-1,2,3 + Micro HM

- Doubles as an extension tube, without any noticeable loss of light



Assembled Weight: 717.4g (25.3oz)  
 Assembled Length: 300.3mm (11.82in)  
 Diameter: 48mm (1.89in)

## INFINITY PHOTO-OPTICAL

# ROADMAP Instructions

## The Award Winning TS-160 System With Universal T2 Mount

### 45° Prism



- The 45 & 90-degree prisms allow the TS-160 to function as a periscope with 4 unique lenses that offer up to 16x Micro and Infinity focus to within inches of the subject.
- 45-Degree Prism — allows a more relaxed set up for the camera and lens when used in periscope mode with the FlipR.
- 90-Degree Prism — use by itself or with the FlipR to create a right-angle periscope lens.
- Follow the simple building directions found in the "Prism Assembly Guide".
- Use the Micro HM for up to 16x macro or the SFX-1, 2, 3 lenses for Deep Focus on the Prisms.
- Macro Pro does not work with the Prisms.

### 90° Prism



Unique lenses that utilize Micro Technology for unrivaled sharpness and detail

- Incredibly Deep Depth of Field
- Facilitate Forced Perspective
- Exceptional Sharpness
- Redefines the IMMERSIVE EXPERIENCE
- Unheard-of MACRO/MICRO to 16x
- Full Range of Focal Length Lenses
- Universal T2 Mount
- Easy to Use
- Made in the U.S.A.



### Accessories



45° Prism



90° Prism



T2 PL Mount



Mounting Clamp and Bar

### Additional T2 Mounts

Sony  
 Canon  
 Nikon  
 Leica  
 Pentax  
 Lumix

### MICROSCOPE TECHNOLOGY MEETS PHOTOGRAPHY & CINEMATOGRAPHY

The TS-160 Lens System consists of a unique, patented internally-focusable microscope body which accepts 5 front lenses for macro, micro and special deep focus effects with imaging capabilities beyond any other known optical devices.



Fruit Fly shot with a Micro HM lens at 16x



Deep Depth Focus with a SFX-3 lens



[www.ts-160system.com](http://www.ts-160system.com)

## Macro Pro 135mm

- Use as a 4x Macro lens at 32mm (1.25in) to create unique close-up photography
- Use as 135mm Telephoto lens and focus on a face to make an interesting portrait
- Can use with the FlipR as an extension tube, without any noticeable loss of light



W: 372.4g (13.14oz) L: 169.8mm (6.69in) Dia: 48mm (1.89in)

• Micro HM • SFX-1 • SFX-2 • SFX-3  
Use the FlipR to invert the upside-down image also doubles as an extension tube without any noticeable loss of light

## Micro HM 100mm

- Extreme Micro images with a magnification up to 16x at 18mm
- Focus to Infinity when shooting tabletop and the Micro HM will maintain sharp focus from INFINITY to ~ 20in, allowing the camera to move without losing focus.
- It functions like a 100mm



W: 399.4g (14.09oz) L: 225.8mm (8.89in) Dia 48mm (1.89in)

### OPERATING RANGES

18mm 50mm 15cm 50cm 2.7m  
3/4in 2in 6in 20in 9ft ∞



## SFX-1 100mm

- When focused to infinity can hold sharp focus from INFINITY to ~ 20in



W: 457.4g (16.13oz) L: 250.1mm (9.85in) Dia: 48mm (1.89in)

### OPERATING RANGES

18mm 50mm 15cm 50cm 2.7m  
3/4in 2in 6in 20in 9ft ∞



## SFX-2 50mm

- 50mm lens when focused to infinity can hold sharp focus from INFINITY to ~ 6in



W: 443.4g (15.64oz) L: 232.1mm (9.14in) Dia: 48mm (1.89in)

### OPERATING RANGES

18mm 50mm 15cm 50cm 2.7m  
3/4in 2in 6in 20in 9ft ∞



## SFX-3 35mm

- 35mm lens when focused to infinity can hold sharp focus from INFINITY to ~ 2in



W: 440.4g (15.53oz) L: 235.6mm (9.28in) Dia: 48mm (1.89in)

### OPERATING RANGES

18mm 50mm 15cm 50cm 2.7m  
3/4in 2in 6in 20in 9ft ∞



## LENS SYSTEM TIPS

1. Lens Coverage
  - a. TS-160 w/ 30mm tube covers S-35 / APS-C 34mm  $\phi$  F/14
  - b. TS-160 w/ 30mm + 24mm tubes cover full frame 44mm  $\phi$  F/22
2. The Macro Pro accepts multiple filter options (see QR code on front page for options)
3. The TS-160 has an Iris that can be used to control softness / sharpness. When set to the solid white dot you have the best sharpness and contrast. ~T22
4. How to Focus Lenses:
  - a. Focus to INFINITY if possible, or the furthest physical object
  - b. Set the Iris to the solid white dot for best sharpness and contrast
5. SFX Lens focal lengths and operating ranges
  - SFX-1 lens 100mm EFL holds Focus from INFINITY to ~ 50cm (20in)
  - SFX-2 lens 50mm EFL holds Focus from INFINITY to ~ 15cm (6in)
  - SFX-3 lens 35mm EFL holds Focus from INFINITY to ~ 5cm (2in)

6. Micro HM has two preferred operating ranges:
  - Micro focus range starts at 50cm (20in) and goes to 18mm (3/4in) for (16x Mag)
  - Holds focus from INFINITY to ~ 50cm (20in)
7. Image is upside down on all three (3) SFX lenses and the Micro HM. Flip image in camera, monitor, or use the FlipR.
  - a. The FlipR with the TS-160 and 45 degree prism produces an upright image.
  - b. The FlipR with the TS-160 and 90 degree right angle produces an upside-down image.
8. To orient the prism to match your horizon, unlock Horizon Adjust (see prism diagram for more details)
9. Lens support bracket (mounting clamp and bar) can be used wherever needed for additional support.