

Ranger: Focal length:480 Apparent Focal Length (for Digital to 35mm conversion): 770
Aperture: 70 FOV:108 x 162 arc min F-Ratio: 6.9

Camera Preparation:

Insert Fresh Battery, locate spare battery.
Check battery on remote cable if any.
Locate timer or watch.
Focus diopter adjustment in View Finder and Tape
Insert/ Check for Large/Fast CF Card in camera
Check space/reformat card. If new, take test exposure to verify operation.
Insert/ lock/ and check Field Flatteners.
Attach T-ring, Lock/Check with camera
Check Camera Functions:
 Clear all camera settings
 Clear All Custom Functions
 Set/Check Following Custom Functions:
 6. Exposure Level Increments--0:1/2 Stop
 7. Flash Firing--1: Does not fire
 9. Bracket Sequence--3:-,0,+ Disable
 12. Mirror Lock: 0:Disable
 Set/Check following Menu Items:
 Quality=Large Fine
 Shoot w/o card=Off
 AEB=1/2 stop
 LCD Brightness=High
 Date/time= (accurate local or UT)
 Drive: continuous
 ISO:200
 Metering Partial (rectangle with split circle, but no black dot)

Tripod/Telescope Preparation:

Assemble Tripod as low as practical
Place tripod on Vibration Absorption Pads
Check Quick Release Pad attachment to Telescope
Attach Solar finder
Check and attach Solar Filter
Attach Telescope to tripod
Attach Camera to Telescope.
Point at sun, rough focus, and try to run telescope through all positions necessary to follow sun
Adjust Camera (rotate as necessary) to assure it will follow as appropriate.
Check expected location for max eclipse--make sure camera is properly rotated and positioned.
Add weights if possible to tripod and OTA.
Check locations again.
Attach Rear screen viewer,
Attach, focus and tape as necessary the Varimagini Finder.
Attach Remote Cable, test.

Test Exposures:

Focus through viewfinder
Use Stiletto Focuser to focus.
Lock Focuser
Replace Camera
Take test exposure, centering on sun. Start at 1/1000.
Choose exposure Histogram (Review, Info) is about two thirds way to right.. Make sure there is no blacked out part flashing on sun
Change exposure setting to "Ideal" exposure as established in preceeding step.

Pre First Contact:

Refine Focus

Take pictures of full sun. Use Exposure setting determined

First Contact to 15 seconds before Second Contact:

Continue to take pictures at 5 minute intervals.

After last partial eclipse exposure, refocus camera,

Set camera to 1/6000,

Check other settings

AEB to 1/2 stop

Drive to Continuous

ISO to 200

Quality to Large/Fine

PARTIAL--1/1000

BAILEY'S BEADS 1/4000

DIAMOND RING--1/500

CORONA--1/1000 to 1 SEC

PROMINENCES--1/1000

15 Seconds to Second Contact: (Bailey's Beads to Diamond Ring)

Set Exposure to 6000 **SET 6000**

Remove Solar Filter

Press shutter button

Click DOWN 1, and REPEAT 6 Times

This will yield: 8000, **6000**,4000, 6000,**4000**,3000,
4000,**3000**,2000, 3000,**2000**,1500,
2000,**1500**,1000, 1500,**1000**,750

BEADS CLICK SPEED UP 4 TIMES to **4000**

Press Shutter Twice . or as many times as Beads display

This yields 6000,**4000**,3000

RING CLICK SPEED DOWN 6 TIMES to **500**

Press Shutter Twice

This yields 750,**500**,250

STOP AND LOOK AT ECLIPSE

Look through viewfinder and recenter if necessary.

Set Exposure to 1000 **SET 1000**

REPEAT THE FOLLOWING 11 Times

Take Exposure, Click Down **Twice**.

STOP AND LOOK AT ECLIPSE

This yields: 1500,**1000**,750, 750,**500**,350,
350,**250**,180, 180,**125**,90, 90,**60**,45, 45,**30**,20,
20,**15**,10, 10,**8**,6, 6,**4**,3, 3,**5**,7, 7,**1**,1.5

Recenter telescope

If you have time, start sequence in reverse.

STOP AND LOOK AT ECLIPSE

At third contact (for 15 seconds)

RING Set Exposure to 500 **SET 500**

Press Shutter Twice

This yields 750,**500**,250

BEADS CLICK SPEED UP 4 TIMES to **4000**

Press Shutter Twice . or as many times as Beads display

This yields 6000,**4000**,3000

After third contact;

REPLACE SOLAR FILTER

Continue exposures at ideal setting until fourth contact.