



# MONARCH

FIELDSCOPES

82ED-S / 82EDA / 60ED-S / 60EDA

# MONARCH



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**WARNING** Never look at the sun directly through optical equipment. It may cause damage to or loss of eyesight.



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## Discover a world of exquisite beauty

Imagine a place where millions of creatures live together in infinitely diverse environments, with no two the same.

That celestial gem hidden in the recesses of space is our planet — Earth.

Come, discover and explore this wondrous world.

Use a tool created by Nikon that crystallises the very best of optical and mechanical technologies.

You will surely be astounded as you behold in the clearest detail a new universe of startling beauty that will give you impressions to last a lifetime.

Discover this beauty with the new MONARCH Fieldsopes.



**MONARCH**

FIELDSCOPES

82ED-S / 82ED-A / 60ED-S / 60ED-A

# Sophisticated optical performance provides a crystal-clear field of view

True to its regal name, MONARCH brings to its users exciting experiences of new observations. Advanced apochromat delivers real colour with high resolution and the Field Flatteners Lens System ensures absolutely sharp images throughout the entire field of view. Nikon's innovative technology present to you a breathtaking vision vastly surpassing what the naked eye can see.



## Advanced Apochromat Optical System with ED (Extra-low Dispersion) glass minimises colour fringing to the furthest limit of the visible light range, realising a contrast-rich, clearer field of view

Nikon's ED (Extra-low Dispersion) glass ensures a contrast-rich and colour-faithful field of view. Redesigning the whole optical system from the ground up, Advanced Apochromat Optical System corrects not only chromatic aberrations of red, blue and green but also violet chromatic aberration to the furthest limits of the visible light range. Cutting-edge lens technology and refined optical design work in synergy to eliminate colour fringing, then deliver outstanding resolving power. The result is unimaginably sharp, high-contrast views.



Advanced apochromat

Without chromatic aberration compensation

- Simulated images

## Field Flatteners Lens System forms sharp images all the way to the periphery

Curvature of field is an aberration that occurs when focusing on the centre of the field of view causing the periphery to go out of focus or vice versa. Nikon's Field Flatteners Lens System compensates for this aberration. This advanced lens design provides consistent, edge-to-edge sharpness while compensating astigmatism and coma aberration at the same time. Observation can be enjoyed with a sharp and clear image throughout the entire field of view.



Field Flatteners Lens System

Without Field Flatteners Lens System

- Simulated images

## Multilayer coating for natural colour fidelity

Multilayer coating is applied to all lens and prism surfaces, allowing powerful light transmission. The resulting bright field of view delivers true-to-life natural colours. Coating also greatly reduces the flare and ghosting that can occur in backlit situations.

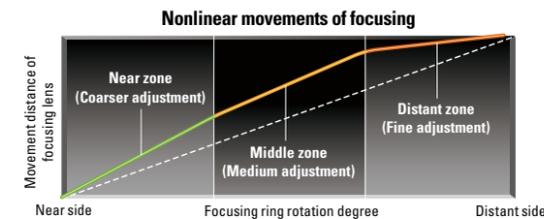
## Total reflection prism for a beautifully bright and clear view

The straight-type models use a Porro prism while the angled-type models employ Nikon's original total reflection prism. Since all reflective surfaces are completely reflective without any loss of light, a bright and vivid view is achieved.



## Optimised Focusing System for fast focusing

The focus ring of MONARCH Fieldscopes provides different focusing speeds for optimal operation: fine focus adjustment for distant subjects and coarser adjustment for nearby subjects. Less stressful, smooth focusing enables you to securely capture your target faster.



## Body design for comfortable observation

The body, which features a highly robust aluminium alloy, provides reliability and ease of operation. The new knurling pattern on the focusing ring enhances its operability. Also, a Type 1 Bayonet Mount with locking system makes eyepiece attachment/detachment easy and secure.



## Waterproof performance for inclement weather

All models can be used without worrying about changing weather conditions in the natural environment. The MONARCH Fieldscope bodies are waterproof\*, sealed with O-rings and packing seals that make them airtight. In addition, the body is filled with nitrogen gas to prevent fog due to sudden temperature changes.

\*Waterproof (up to 1 m/3.3 ft for 10 minutes) (NOT designed for underwater usage)

## Newly designed MONARCH Fieldscope MEP eyepieces deliver high optical performance

Nikon has developed a lineup of three new eyepieces exclusively for MONARCH Fieldscopes. Each employs a new optical system, and a Field Flatteners Lens System that delivers consistent sharpness and clarity across the entire field of view. While providing a wide field of view, sufficiently long eye relief is ensured. Thus, not only do you enjoy peerless viewing — you can also perform collimate photography with a compact digital camera. When attached to a Fieldscope, each of the three new MEP eyepieces are waterproof\*, ensuring safe use even during unexpected weather changes.

\*1 Waterproof: As tested by water equivalent to 5 mm per minute, for a duration of 30 minutes. (NOT designed for underwater usage)



- Simulated images

## MEP-30-60W: A wide field of view and high resolving power throughout the entire zoom range

This zoom-type eyepiece with a zoom range from 30x to 60x\*2 realises ultra-high optical performance. With an advanced optical design, it corrects image distortions while maintaining a wide field of view over the whole zoom range. What's more, the sharp and clear images from edge to edge are equivalent to those of non-zoom eyepieces.



- Simulated images

## MEP-20-60: Comfortable viewing with ease of use

The versatile 20x-60x\*2 zoom-type eyepiece with long eye relief provides sufficient angle of view for the entire zoom range. Chromatic aberrations are well corrected even at high magnifications. The peripheral flatness of sharp images is also ensured, for clear viewing throughout the zoom range.



- Simulated image

## MEP-38W: Superb image quality and outstandingly wide field of view

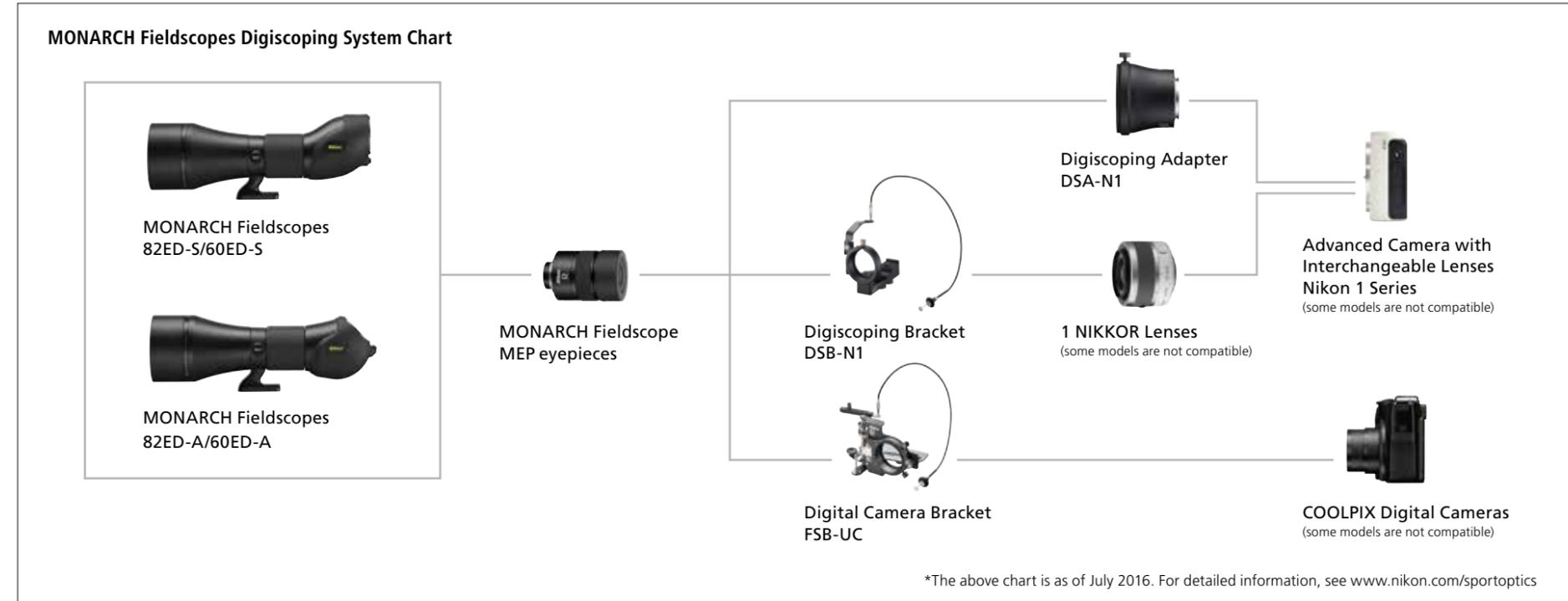
This 38x\*2 magnification eyepiece offers an amazingly clear image. The wide 66.4 degree apparent field of view combines with 18.5 mm long eye relief. Curvature of field and astigmatism are optimally corrected to produce uniformly high resolution from the centre to the periphery.

\*2 When attached to MONARCH Fieldscope 82 series.

• MONARCH Fieldscope MEP eyepieces employ Type 1 Bayonet Mount. Other eyepieces cannot be used for MONARCH Fieldscopes.

## Digiscoping system with MONARCH Fieldscopes

By using a bracket or adapter, a compatible Nikon camera can be attached to a MONARCH Fieldscope. Coupled with a Nikon 1 Advanced Camera with interchangeable lenses or a COOLPIX compact digital camera, a MONARCH Fieldscope lets you enjoy super-telephoto photography.



## Accessories



A case that protects the MONARCH Fieldscope while enabling observation and digiscoping with the case attached.



## Specifications

### MONARCH Fieldscopes

				
Objective diameter (mm)	82	82	60	60
Close focusing distance (m/ft)	5.0/16.4	5.0/16.4	3.3/10.8	3.3/10.8
Filter-attachment size (mm)	86 (P=1.0)	86 (P=1.0)	67 (P=0.75)	67 (P=0.75)
Length (mm/in.) <sup>*1</sup>	325 (355 <sup>*2</sup> )/12.8 (14.0 <sup>*2</sup> )	334 (364 <sup>*2</sup> )/13.1 (14.3 <sup>*2</sup> )	262 (285 <sup>*2</sup> )/10.3 (11.2 <sup>*2</sup> )	270 (293 <sup>*2</sup> )/10.6 (11.5 <sup>*2</sup> )
Height × Width (mm/in.) <sup>*1</sup>	124×103/4.9×4.1	112×108/4.4×4.3	124×93/4.9×3.7	110×98/4.3×3.9
Weight (g/oz) <sup>*1</sup>	1,650/58.2	1,640/57.8	1,260/44.4	1,250/44.1
Waterproof performance	Fieldscope unit: Waterproof and fog-proof (up to 1 m (3 ft 3 in.) for 10 min., nitrogen gas purged) <sup>*3</sup>			

\*1 Without caps \*2 When hood is fully extended. \*3 This product will suffer no damage to the optical system if submerged or dropped in water to a maximum depth of 1 meter (3 ft 3 in.) for up to 10 minutes. NOT designed for underwater usage. Note: Above specifications do not include eyepieces.

### Eyepieces

						
MONARCH Fieldscope diameter (mm)	82	60	82	60	82	60
Magnification (×)	30-60	24-48	20-60	16-48	38	30
Angular field of view (Real/degree)	2.0-1.2 <sup>*3</sup>	2.5-1.5 <sup>*3</sup>	2.1-1.0 <sup>*3</sup>	2.6-1.2 <sup>*3</sup>	2.0	2.5
Angular field of view (Apparent/degree) <sup>*1</sup>	55.3-65.6 <sup>*3</sup>		40.4-54.3 <sup>*3</sup>		66.4	
Field of view at 1,000 m (m)	35-21 <sup>*3</sup>	44-26 <sup>*3</sup>	37-17 <sup>*3</sup>	45-21 <sup>*3</sup>	35	44
Field of view at 1,000 yd. (ft)	105-63 <sup>*3</sup>	132-78 <sup>*3</sup>	111-51 <sup>*3</sup>	135-63 <sup>*3</sup>	105	132
Exit pupil (mm)	2.7-1.4 <sup>*3</sup>	2.5-1.3 <sup>*3</sup>	4.1-1.4 <sup>*3</sup>	3.8-1.3 <sup>*3</sup>	2.2	2.0
Relative brightness	7.3-2.0 <sup>*3</sup>	6.3-1.6 <sup>*3</sup>	16.8-2.0 <sup>*3</sup>	14.4-1.7 <sup>*3</sup>	4.8	4.0
Eye relief (mm)	15.2-14.2 <sup>*3</sup>		16.1-15.3 <sup>*3</sup>		18.5	
Length (mm/in.) <sup>*2</sup>	91/3.6 (with DS) <sup>*4</sup> , 92/3.6 (with TS) <sup>*5</sup>		89/3.5		73/2.9	
Outer diameter (mm/in.) <sup>*2</sup>	62/2.4		62/2.4		61/2.4	
Weight (g/oz) <sup>*2</sup>	370/13.1 (with DS) <sup>*4</sup> , 400/14.1 (with TS) <sup>*5</sup>		350/12.3		270/9.5	
Waterproof performance	Eyepiece: Not waterproof With Fieldscope attached: Waterproof (water equivalent to 5 mm (0.2 in.) per minute for a duration of 30 minutes) <sup>*4</sup>					

\*1 Calculated based on the ISO14132-1:2002 standard. \*2 Without caps. \*3 Designed reference value at highest magnification. \*4 When the DS (digiscoping) ring attachment is attached. \*5 When the TS (turn slide) ring attachment is attached. \*6 This product will suffer no damage to the optical system in falling water equivalent to 5 mm (0.2 in.) rainfall per minute for a duration of 30 minutes. NOT designed for underwater usage. Note: Because values shown on these charts were designed values rounded up/down, calculation of figures may not match exactly.