

Focusing perfection:
professional binoculars
from Fujinon.



FUJINON



Image stability: the S1240 and S1640 Stabiscopes.

The applications.

Fujinon launched the very first Stabiscopes back in 1980. Ever since, the firm has enjoyed a reputation as the world's leading manufacturer of binoculars with highly developed image stabilisation technology. Stabiscopes are used for professional observation in all situations where movements or vibrations would disturb the image. The police force, border surveillance, coastguards and rescue services are among their many users, along with the NASA space shuttle missions. Fujinon Stabiscopes are ideal for flexible assignments on land, in the air or on water.

The technical design.

Gyroscope motors stabilise the binocular image even under the most extreme conditions. The exclusive, high-speed gyroscope motor of the Stabiscopes guarantees optimum stabilisation: at the slightest vibration, the gyro pulls the image back into its starting position automatically and instantaneously. It is coupled for this purpose to a prism unit with variable suspension. When the gyroscope motor is switched on and the prisms released, they are suspended completely freely, unaffected by any vibrations in the vicinity. The binoculars can thus be used at any angle. The image compensation angle is at least $\pm 5^\circ$ in all directions.

The top-quality, multiple-coated Stabiscopes optics achieve an absolutely sharp, high-resolution image with the maximum possible light transmission. Stabiscopes are outstanding for their rugged, completely watertight design. Weighing just 1.8 kg, they are only marginally heavier than high-quality 7 x 50 waterproof binoculars and consequently very easy to handle.





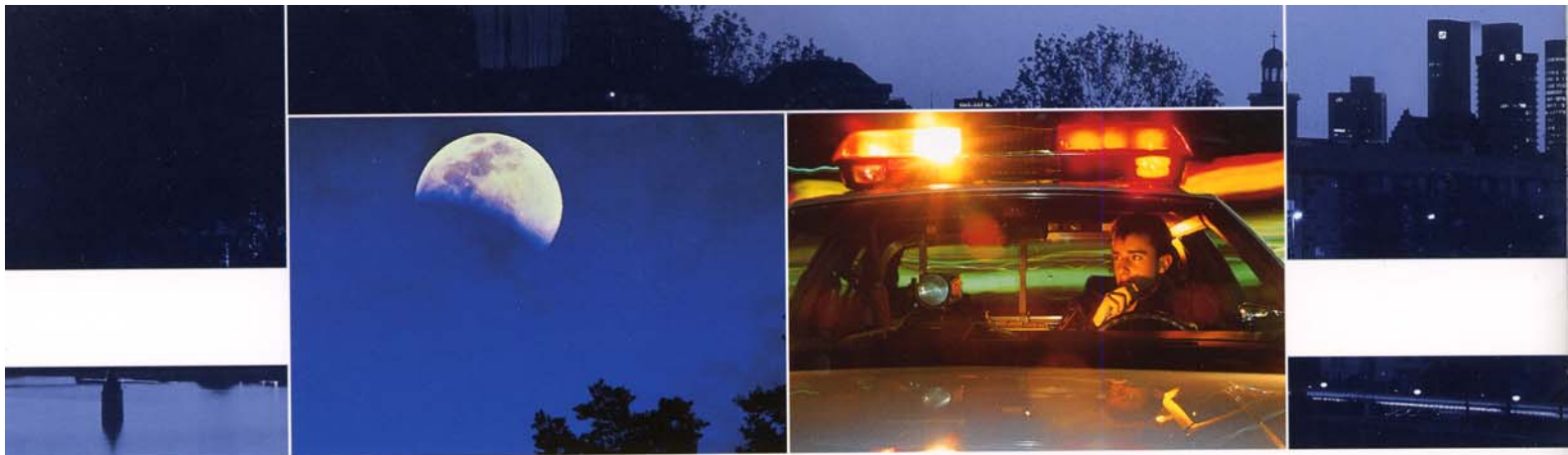
Stabiscopes S 1240



The models.

Fujinon offers three different Stabiscopes variants: the S1240 magnifies twelve times and the S1640 sixteen times. The S1240 D/N model with 12x magnification is perfect for day and night-time use.

All Stabiscopes can either be battery-operated (four round cells or one 2CR5 lithium cell) or run from the enclosed external power supply. This power supply is designed for 12–32 V DC and can be connected either to the on-board electrical system or to a battery.



Precision day and night: the S1240 D/N Stabiscopes.

The applications.

The S1240 D/N achieves 12x magnification with a lens diameter of 40 mm. In daytime conditions it can be used just like an ordinary Stabiscopes. In darkness the standard oculars of the S1240 D/N can be exchanged in just a few seconds for special ones with intensifier tubes to give you night-vision binoculars with image stabilisation. The image intensifier tubes facilitate stabilised distance vision in stereo. The image quality that is achieved in the dark depends on the intensifier tubes installed. Fujinon offers the S1240 D/N with integrated image intensifier tubes from Delft Electronic Products (DEP) in three different qualities:

Super Gen is ideal for all locations with relatively strong residual light, for example close to urban areas or in weakly lit environments.

SHD3 is suitable for all locations with relatively weak residual light as well as for open terrain and water.

XD4 represents the most powerful intensifier tube generation. Fujinon recommends the technology whenever there is only minimal residual light. The XD4 guarantees good vision in even the darkest of nights in wooded areas.

Stabiscopes with image intensifier tubes from DEP are sold publicly within the European Union and can also be purchased by private individuals. An export licence is required for all exports to non-EU countries.

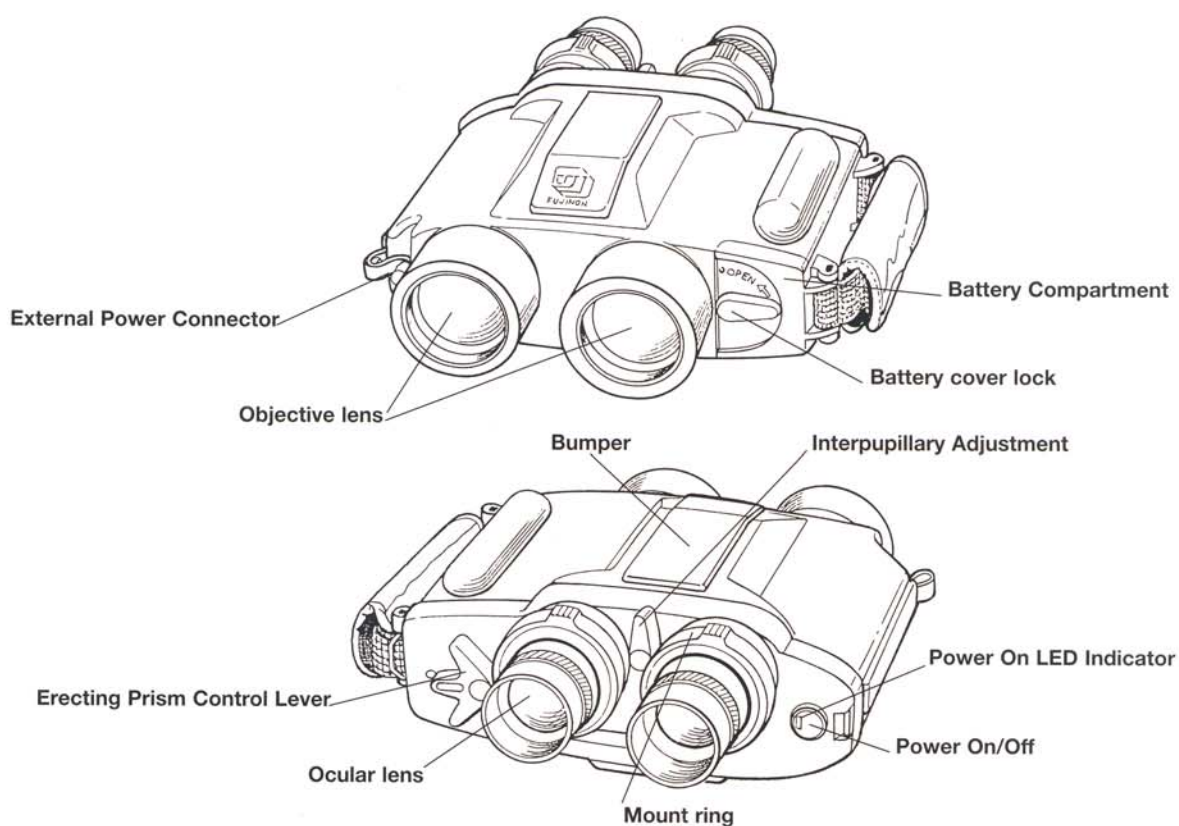
The quality in figures.

Key parameters of the S1240 D/N variants:

All indicated values refer to typical performance.

S 1240 D/N version:	S/N at 108 microlux	Resolution lp/mm	Luminous gain (net)	MTF at 7.5 lp/mm	MTF at 25 lp/mm	Recommended environment
Gen II	13 – 17	34	4000	58%	16%	Slight illumination Coastal environment, open sky
Super Gen	17 – 20	36	6000	60%	18%	
SHD3	18 – 22	50	12000	72%	30%	
Gen III	20 – 24	64	12000	75%	35%	Dark/deep forrest environment
XD4	20 – 24	64	12000	80%	46%	

The image intensifier tubes marked in colour are supplied with the S1240 D/N as standard. Comparison of Gen II and Gen III.



Parameters for image intensifier tubes.

The quality of image intensifier tubes is determined by the following parameters:

S/N stands for signal-to-noise ratio and describes the sensitivity of the image intensifier tube as a whole.

lp/mm is the abbreviation for line pairs per millimetre and specifies the resolution.

Net gain refers to the factor by which the available remaining light is multiplied after passing through the complete intensifier tube.

MTF stands for modulation transfer function and designates the contrast of the intensified image.



Techno-Stabi 14 x 40



The inexpensive alternative:

Techno-Stabi 14x40.

The technical design.

With the Techno-Stabi 14 x 40, Fujinon now offers the advantages of professional image stabilisation in a low-price product for the very first time. As a low-price alternative to the Stabiscopes, the Techno-Stabi with 14x magnification compensates almost any vibration torque electronically. The compensation angle of $\pm 5^\circ$ in both the horizontal and the vertical direction guarantees a permanently stable image. With its waterproof casing, belt and socket for connection to the 12–32 V DC on-board electrical system, the Techno-Stabi is an extremely versatile unit. Fujinon supplies the Techno-Stabi with an indestructible Pelican hard case for professional applications.

Quality in a nutshell: Fujinon binocular specifications.

	S1240	S1640	S1240 D/N (Day setting) (Night setting)		Techno-Stabi
Magnification	12x	16x	12x	12x	14x
Objective diameter (mm)	40	40	40	40	40
Eye relief (mm)	17	12	17	11.5	13
Angle of view	4.7°	3.4°	4.7°	4.2°	4°
Field of view over 1,000 m (m)	82	60	82	73	87.5
Exit pupil (mm)	3.3	2.5	3.3	–	2.86
Relative brightness	11.1	6.25	11.1	–	8.2
Interpupillary distance (mm)	60-70	60-70	60-70	60-70	60-70
Length (mm)	210	210	220	240	186
Max. width (mm)	200	200	200	200	148
Weight (kg)	1.8	1.8	1.8	2	1.3
Compensation angle	5°	5°	5°	5°	5°
Waterproof	Yes	Yes	Splashwater	Splashwater	Yes
Batteries	4 x AA or 1 x 2CR5	4 x AA or 1 x 2CR5	4 x AA or 1 x 2CR5	4 x AA or 1 x 2CR5	4 x AA
Accessories					
Carrying strap	S	S	S	S	S
Plastic case	S	S	S	S	A
12–32 V DC regulator	S	S	S	S	A
Nebular- (orange-) filter	A	A	A	A	A
Polarising filter	A	A	A	A	A

S = Standard
A = Accessory



PYSER - SGI LIMITED
Fircroft Way, Edenbridge, Kent,
United Kingdom, TN8 6HA
Telephone: +44 (0)1732 864111
Facsimile: +44 (0)1732 865544
Email: sales@pyser-sgi.com
www.pyser-sgi.com



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