

SKATER[®] OPERATING INSTRUCTIONS

SCOPE

Appropriate Lenses for SKATER Scope

Only 35mm PL lenses should be used. The SKATER Scope can be attached to both 35mm and 16mm cameras. It covers the full S35 format with most lenses.



WARNING! Certain 16mm PL lenses have a long rear lens element that could cause damage to lens and scope.

The SKATER Scope has been optimized for the optical design of current cine film lenses, such as Zeiss H51.3, Zeiss Ultra Primes, Cooke S4, Century and Arri light-weight zooms etc. It provides superb image quality when used with those lenses. Some particular lenses of the Zeiss 2.1 series as well as the Arri Macros 2.1 have a much shorter exit pupil than common lenses today. These lenses should not be used as vignetting might occur. A list with "not recommended" lenses is available under www.pstechnik.de. Due to their size and weight Arri Master Primes should not be used.

All common photo lenses (even most lenses with a reduced digital format) equipped with a Nikon or Canon mount will give excellent results. To use photo lenses, the PL mount can be replaced with an optional P+S Technik lens mount for Nikon or Canon. Never use any photo lens mount other than the original P+S Technik lens mount. The change of a lens or camera mount should only be performed by an experienced technician in a camera rental house.

F-Stop and Light Loss

The light loss on the SKATER Scope is 2/3 of a stop and the calculated F-Stop is 4 1/3. Those two values add up to a T-Stop of 5.6. The aperture is to be set on the mounted lens itself.

Example: If you would like to expose for an 8.0, you have to subtract the loss of 2/3 and set the lens to 5.6 1/3. Any stop between wide open and 4 1/3 on the lens will be ignored as the Scope only transmits a 4 1/3. Opening the lens iris beyond 4 1/3 has no effect on exposure or depth of field. We still recommend to set the iris at 4 1/3 in this case.

P+S TECHNIK 
Professional Cine Equipment Manufacture

tel +49-89-45 09 82 30 | www.pstechnik.de
fax +49-89-45 09 82 40 | info@pstechnik.de

Image Rotation and Horizon

The SKATER Scope provides unlimited image rotation with no mechanical stops. The image rotation scale (5) is equipped with a 0.8 gear and can be motorized with standard lens motors from both sides. After tilt or pivot settings have been altered, the image rotation is also used to level the horizon.

Adjusting Tilt Module and Pivot Angles

The angle of the tilt module (1) can be adjusted and fixed in any 2.5° increment within a range of +/-105°. To do so, open up the clamp screw (2) and push and hold the tilt release to the side. Set the tilt module to any desired angle and reseal the clamp screw again. The whole lens block can also be pivoted to any desired angle by opening the pivot lock ring (3).



WARNING! Always support tilt module and mounted lens if the clamp screw or the pivot lock ring is opened. Always ensure all locking devices are securely fastened before you continue working.

Focus and Macro Function

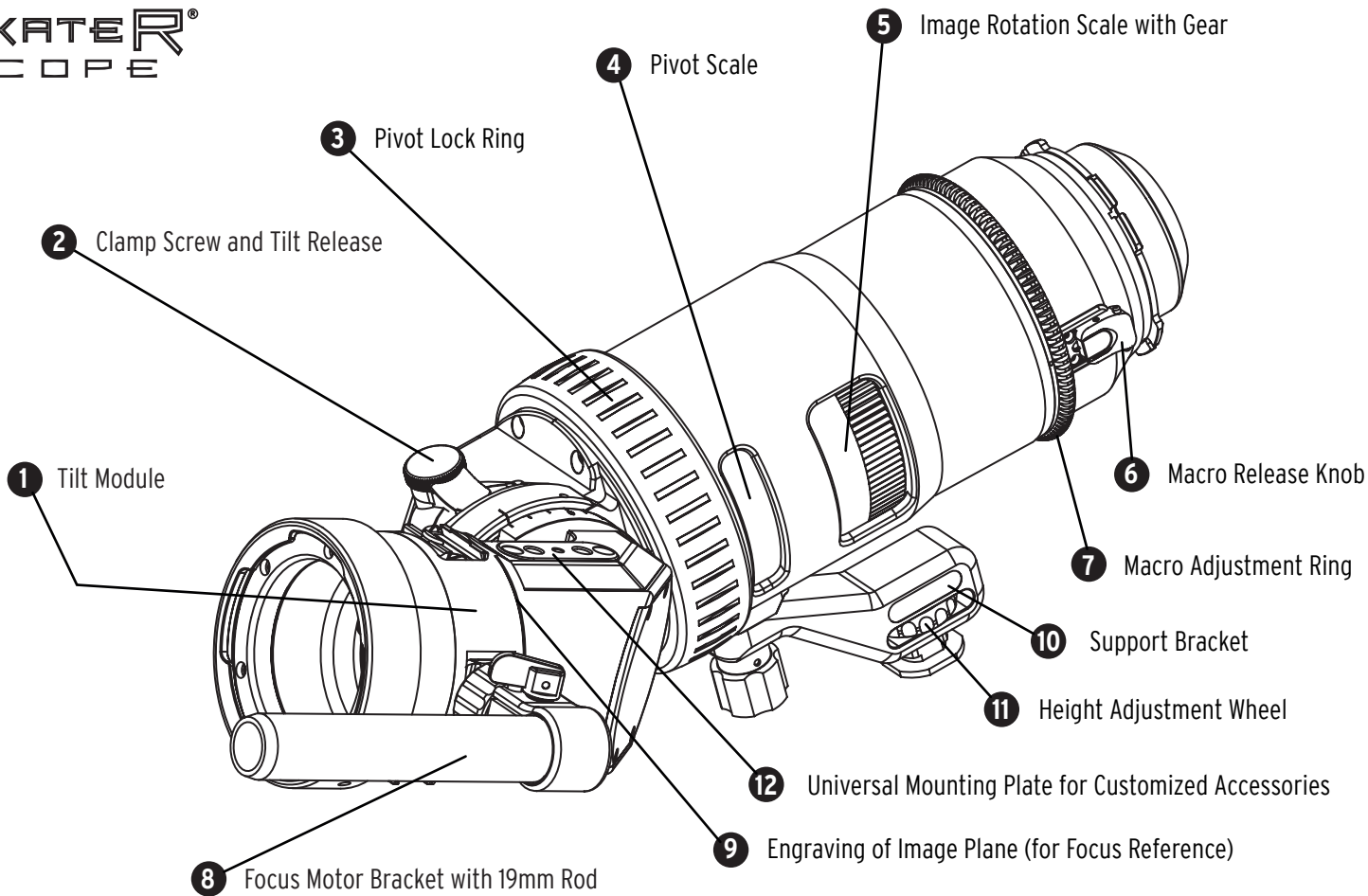
The focus should be set on the mounted lens. An engraving (9) on the tilt module indicates the image plane for focus adjustments, but the eye focus is still the best solution.

The manufacturer recommends the use of lens motors to improve handling. The focus motor bracket (8) can be mounted on three sides of the tilt module (1) and is supplied with interchangeable rods (19mm or 15mm diameter).

In addition, the SKATER Scope offers a macro function. With the macro adjustment ring (7) the focus area of your lens can be shifted towards the camera: slide the macro release knob (6) towards the camera and set the macro focus. To reset the macro function disengage the macro release knob by pushing it away from the camera and turn the macro adjustment ring back until the release knob clicks into its locked position.

Support Bracket

It is imperative to use the SKATER Scope only with the supplied support bracket (10) and a common support bridge. The height of the support bracket is adjustable with the height adjustment wheel (11). Always ensure the weight of the lens is supported by the bracket.



RECOMMENDED LENSES

The SKATER Scope snorkel lens system brings the market into a new dimension of creating images. Mainly PL mounted film lenses can be used, but smaller compact photo lenses (e.g. from Nikon) are also supported by our interchangeable lens mounts.

A large variety of existing lenses will fit, but this does not mean all, as there are some which show limitations.

The compability of a lens to the SKATER Scope depends mainly on the optical design of the lens (basic criterion is the positioning of the exit-pupil). Generally, an exit-pupil position between 60 and 80mm to the film plane is best to use. We have no influence on the engineering of existing lenses, but during the development of the SKATER Scope, our goal was to make sure that it worked with as many different types of lenses as possible.

Enclosed you will find a short list of lenses that have been tested. If your lens does not appear, please let us know so we can update our list.

Lenses	Exit Pupil Position			* Limited Suitable	Not Suitable
	Measured to Film Plane	Manufacturer Information	Very Well Suitable		
8mm R				✓	
10mm 2.1					✓
12mm 1.9					✓
14mm 1.9		61,5	✓		
16mm 1.9		61,7	✓		
20mm 1.9		66,6	✓		
24mm 1.9		65,4	✓		
28mm 1.9		74,5	✓		
32mm 1.9		59,9	✓		
40mm 1.9		83,9	✓		
50mm 1.9		68,3	✓		
65mm 1.9		61,1		✓	
85mm 1.9		60,8	✓		
100mm 1.9		60,1	✓		
135mm 1.9		80,8	✓		

Zeiss VP LDS					
10mm 2.1					✓
12mm 1.9					✓
14mm 1.9		61,5	✓		
16mm 1.9		61,7	✓		
20mm 1.9		66,6	✓		
24mm 1.9		65,4	✓		
28mm 1.9		74,5	✓		
32mm 1.9		59,9	✓		
40mm 1.9		64,3	✓		
50mm 1.9		70	✓		
65mm 1.9		83,9		✓	
85mm 1.9		68,3	✓		
100mm 1.9		61,1	✓		
135mm 1.9		60,8	✓		

Lenses	Exit Pupil Position				
	Measured to Film Plane	Manufacturer Information	Very Well Suitable	* Limited Suitable	Not Suitable
Zeiss HS T1.3					
18mm T1.3 Distagon	70,1		✓		
25mm T1.3 Distagon	70,7		✓		
35mm T1.3 Distagon	64,4		✓		
50mm T1.3 Planar	67,6		✓		
65mm T1.3 Planar	85,9			✓	
85mm T1.3 Planar	69,6		✓		

COOKE S4					
Lenses	Measured to Film Plane	Manufacturer Information	Very Well Suitable	* Limited Suitable	Not Suitable
14mm T 2.0	70,3		✓		
16mm LDS	59,9		✓		
18mm T 2.0	49,5				✓
21mm T 2.0	60,5		✓		
27mm T 2.0	46,1				✓
32mm T 2.0	63,9		✓		
35mm T2.0			✓		
40mm T 2.0	107,6				✓
50mm T 2.0	122				✓
75mm T 2.0					✓
100mm T 2.0	60,6				✓
135mm T 2.0					✓

Lenses	Exit Pupil Position				
	Measured to Film Plane	Manufacturer Information	Very Well Suitable	* Limited Suitable	Not Suitable
Zeiss Standard T2					
10mm 2.1 Distagon					✓
12mm 2.1	39,6				✓
14mm 2.0 Distagon	62,8		✓		
16mm 2.1 Distagon	38,9				✓
20mm 2.1 Distagon					✓
24mm 2.1 Distagon	44,4				✓
28mm 2.1 Distagon	59,9		✓		
32mm 2.1 Planar	36,2				✓
40mm 2.1 Planar	46,3				✓
50mm 2.1 Planar	69		✓		
60mm 3 Macro Planar	64,7		✓		
85mm 2.1 Planar	77,2			✓	
100mm 2.1 Planar	92,4			✓	
135mm 2.1 Planar	83,3		✓		

ARRI Macro					
Lenses	Measured to Film Plane	Manufacturer Information	Very Well Suitable	* Limited Suitable	Not Suitable
50mm T3	53,3		✓		

NIKON					
Lenses	Measured to Film Plane	Manufacturer Information	Very Well Suitable	* Limited Suitable	Not Suitable
18mm T3.5	59,1		✓		
24mm T3.5	69,6		✓		
35mm T3.5	59,5		✓		
Sigma 8mm T4.0	51,8		✓		

* limited use means that at a certain setting of the iris the vignetting will appear