



ZEISS Supreme Prime

Mount Change Instructions



Table of Contents

Introduction	3
Explanation of Symbols	3
Overview	4
Delivery Contents of a ZEISS Supreme Prime	4
Technical Data	5
Changing the Mount of a ZEISS Supreme Prime	6
Detaching a Mount	6
Attaching a Mount	10
Adjusting a ZEISS Supreme Prime to Your Digital Camera	15
Testing the Sharpness	16
Correcting the Flange Focal Distance	19
Appendix	21
Color Code of the Shims	21
Shimming Table	21
Mount Change Accessories	22
Glossary	23

Introduction

In this manual you learn how to change the mount of a ZEISS Supreme Prime and how to match it to a digital camera. In order to explain the procedure, this manual uses a ZEISS Supreme Prime lens, which is scaled in feet with PL mount.

Explanation of Symbols



The information symbol indicates additional information, which is useful for the context.



The skip symbol indicates that under certain circumstances you can skip certain steps.



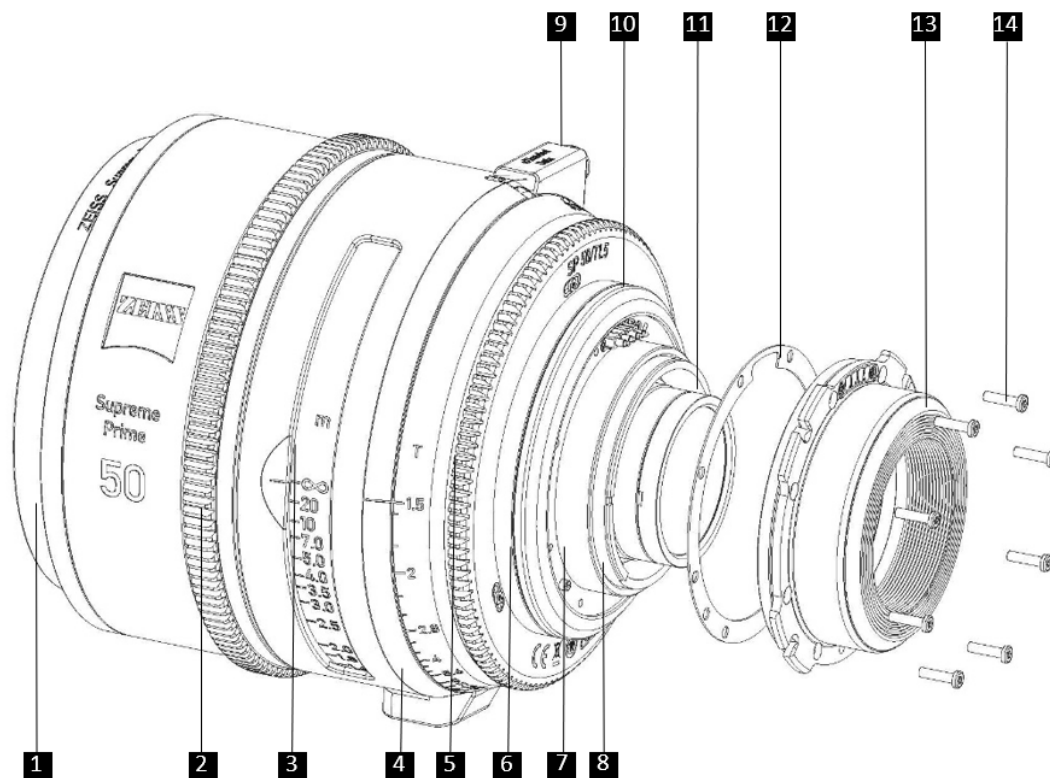
The result symbol indicates information about the obtained result of a step.



The warning symbol indicates dangerous situations and actions, which might impair the functionality of the product, damage the product or hurt the user.

Overview

- | | |
|----|--------------------------------------|
| 1 | front lens |
| 2 | focus ring |
| 3 | focus and aperture index mark |
| 4 | aperture ring |
| 5 | lens foot |
| 6 | lens barrel |
| 7 | small screw |
| 8 | groove of the lens |
| 9 | eXtended Data interface |
| 10 | electrical interface |
| 11 | rear lens |
| 12 | shims |
| 13 | mount including the black inner ring |
| 14 | T6 screws |



Delivery Contents of a ZEISS Supreme Prime

- 1x ZEISS Supreme Prime
 - 1x Front cap
 - 1x Rear cap
 - 1x Focus lever
- 3x Lens support riser 3/8"

Technical Data

ZEISS Supreme Prime lenses

	Aperture	Close Focus ¹	Length ²	Front diameter	Weight ³	Full-Frame ⁴	Super 35 ⁵
Supreme Prime 21 mm T1.5	T1.5 to T 22	0.3 m 12"	120 mm 4.7"	95 mm 3.7"	1.61 kg 3.55 lbs	79.5°	59.8°
Supreme Prime 25 mm T1.5	T1.5 to T22	0.26 m 10"	119 mm 4.7"	95 mm 3.7"	1.42 kg 3.13 lbs	70.8°	52.3°
Supreme Prime 29 mm T1.5	T1.5 to T22	0.33 m 13"	121 mm 4.8"	95 mm 3.7"	1.61 kg 3.55 lbs	64°	46.8°

¹ Close focus distance is measured from the image plane

² Front to PL mount flange

³ The specified weight refers to the ZEISS Supreme Prime standard lenses.

⁴ Horizontal angle of view for a full-frame camera (aspect ratio 1:1.5, dimensions 36 mm x 24 mm / 1.42" x 0.94")

⁵ Horizontal angle of view for an ANSI Super 35 Silent camera (aspect ratio 1:1.33, dimensions 24.9 mm x 18.7 mm / 0.98" x 0.74")

Supreme Prime 35 mm T1.5	T 1.5 to T 22	0.32 m 10"	119 mm 4.7"	95 mm 3,7"	1.40 kg 3.09 lbs	55°	39.6°
Supreme Prime 50 mm T1.5	T 1.5 to T 22	0.45 m 18"	119 mm 4.7"	95 mm 3,7"	1.22 kg 2.69 lbs	39°	27.5°
Supreme Prime 65 mm T1.5	T 1.5 to T 22	0.6 m 2'	121 mm 4.8"	95 mm 3,7"	30.5	30.5°	21.3°
Supreme Prime 85 mm T1.5	T 1.5 to T 22	0.84 m 2'9"	119 mm 4.7"	95 mm 3,7"	1.42 kg 3.13 lbs	24°	16.7°
Supreme Prime 100 mm T1.5	T 1.5 to T 22	1.1 m 3'9"	119 mm 4.7"	95 mm 3,7"	1.7 kg 3.74 lbs	20.4°	14.2°
Supreme Prime 135 mm CF¹⁰ T1.5	T 1.5 to T 22	1.35 m 4'5"	146 mm 5.7"	95 mm 3,7"	2.27 kg 5.00 lbs	15.6°	10.9°

Changing the Mount of a ZEISS Supreme Prime Lens

In this chapter you learn how to change the mount of a ZEISS Supreme Prime. The procedure consists of two parts which are both mandatory to successfully change a mount. You learn how to detach the currently attached mount and how to attach a different mount. To make sure the ZEISS Supreme works properly, additionally complete the subsequent procedure: [Adjusting a ZEISS Supreme Prime to your Digital Camera](#).

Detaching a Mount

You need

- ☐ ZEISS Supreme Prime
- ☐ ZEISS T6 torx wrench with a torque of 0.4 Nm alternatively: regular
- ☐ T6 torx wrench with a torque of 0.4 Nm ZEISS Interchangeable
- ☐ Mount Set for Supreme Prime



The use of tools offered by ZEISS is highly recommended. You can purchase these tools directly from ZEISS or your trusted ZEISS dealer. See [Mount Change Accessories](#)

Requirements

- ☐ Ensure that your working space is flat and leveled, in order to prevent the lens from tilting and falling over.
- ☐ Ensure that the environment is clean and free from dust so that no dust particles enter the ZEISS Supreme Prime.
- ☐ Ensure that the front lens cap sits on your ZEISS Supreme Prime, in order to avoid scratches.

1. Place your ZEISS Supreme Prime on a flat surface with the mount facing up and the serial number facing away from you.



The serial number is located at the side of the lens foot. The serial number varies.

2. Remove the rear lens cap.



You can now see the mount.

3. With a T6 torx wrench remove the eight torx screws of the mount.



The black inner ring is securely fastened to the mount at the ZEISS factory and does not need to be removed. This also applies to the electrical interface.



The mount is now loose.

4. Carefully detach the mount from your ZEISS Supreme Prime.



If you are changing from a PL mount, you can directly see the shims.



When detaching the mount for the first time, do not remove the shims. Never remove the small screw in the groove of the lens.

Attaching a Mount

You need

- ☐ ZEISS Supreme Prime
- ☐ ZEISS T6 torx wrench with a torx of 0.4 Nm
- ☐ ZEISS Interchangeable Mount Set for ZEISS Supreme Prime



The use of tools offered by ZEISS is highly recommended. You can purchase these tools directly from ZEISS or your trusted ZEISS Dealer. See [Mount Change Accessories](#)

Requirements

- ☐ Ensure that your working space is flat and leveled, in order to prevent the lens from tilting and falling over.
- ☐ Ensure that the environment is clean and free from dust so that no dust particles enter the ZEISS Supreme Prime.
- ☐ Ensure that the front lens cap sits on your ZEISS Supreme Prime, in order to avoid scratches.
- ☐ Make sure you successfully completed Part 1: [Detaching a Mount](#)



If you are changing to a PL mount, skip step 1 and 2, since the PL mount doesn't have an adapter ring.

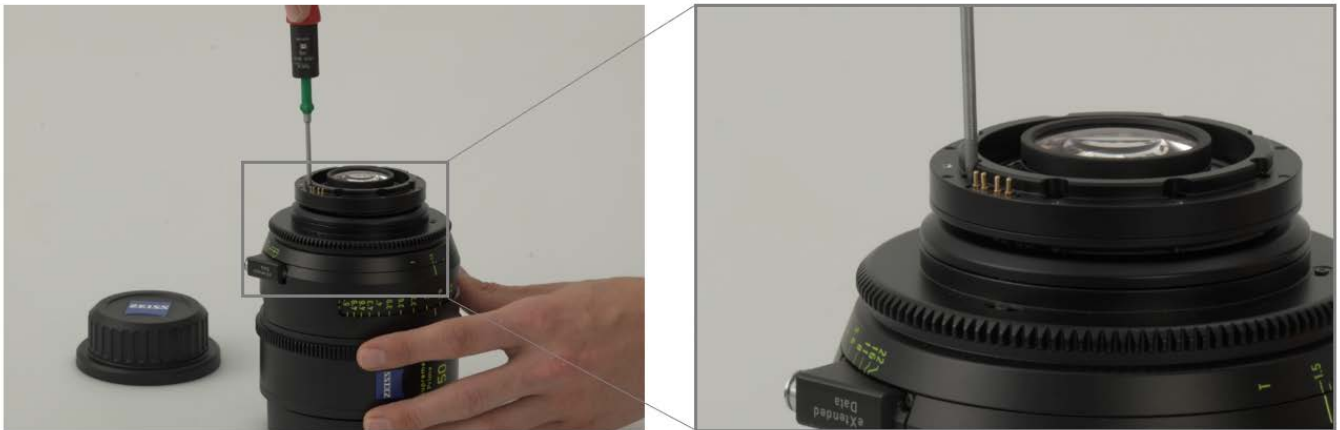
1. Carefully place the adapter ring, which came with your ZEISS Interchangeable Mount Set for the ZEISS Supreme Prime. Make sure the small screw in the groove of the ZEISS Supreme Prime sinks into groove of the adapter ring and the electrical contact fits into the recess.





The shape and height of the black adapter ring varies according to the different mounts.

2. With the T6 torx wrench tighten the torx screws using a torque of 0.4



3. Place the mount on your ZEISS Supreme Prime:

- 3.1 PL mount: Place the PL mount on the ZEISS Supreme Prime in such a way that the recess of the mount lays on top of the electrical interface. The groove on the other side of the PL mount should then also lay on top of the small screw on the lens barrel.



-
- 3.II** LPL mount: Place the LPL mount on the ZEISS Supreme Prime in such a way that the recess of the mount lays on top of the electrical interface. The groove on the other side of the LPL mount should then also lay on top of the small screw on the lens barrel.



4. With the T6 torx wrench tighten the torx screws using a torque of 0.4 N



You have now successfully changed the mount of a ZEISS Supreme Prime.

In this chapter you learned how to detach the mount of your ZEISS Supreme Prime and attach a new mount to your ZEISS Supreme Prime

To make sure your ZEISS Supreme Prime works properly, also complete the subsequent procedure: [Adjusting a ZEISS CP.3 to Your Digital Camera](#)

Adjusting a ZEISS CP.3 to Your Digital Camera

In the following chapter you learn how to adjust your ZEISS Supreme Prime to a digital camera. This is necessary to ensure that the ZEISS Supreme Prime works properly and delivers the maximum image quality. In order to perform this adjustment, ZEISS provides shims in different colors which indicate their thickness.

You need:

- ☐ Tripod
- ☐ Digital camera with live view
- ☐ ZEISS Supreme Prime that needs to be adjusted
- ☐ Siemens star test chart
- ☐ Measuring tape or folding ruler
- ☐ Flat-blade screwdriver
- ☐ At least 3,5 m or 12 ft of free space
- ☐ ZEISS Interchangeable Mount Set for ZEISS Supreme Prime
alternatively: ZEISS Shims set



The use of tools offered by ZEISS is highly recommended. You can purchase these tools directly from ZEISS or your trusted ZEISS Dealer. See [Mount Change Accessories](#)

Requirements:

- ☐ Make sure that the front and rear lens of the ZEISS Supreme Prime lens are clean.
- ☐ Ensure that the illumination is bright and uniform.
- ☐ Set your camera to standard settings (cf. work settings)



Smudges and fingerprints on the lens surface can gently be removed with a soft brush and then with a dry and clean cotton cloth. The ZEISS lens cleaning kit will give superior results and is highly recommended for this purpose. For further information, please watch our tutorial on how to clean your lens. <https://youtu.be/syOzecbtuwg>



Testing the Sharpness

1. Fasten the siemens star test chart on a wall.
2. Mount the ZEISS Supreme Prime on the camera.
3. Mount the camera on a tripod.
4. Position your camera at the testing distance of 3 m or 10 ft.



The testing distance is measured from the siemens star test chart to image plane on your camera.



5. Level the camera.

-
6. Set the aperture of the Supreme Prime to full speed by rotating the aperture ring.



The aperture setting must not be changed during the adjustment process.

-
7. Activate the live view of your camera.

-
8. Select the maximum magnification of the live view.

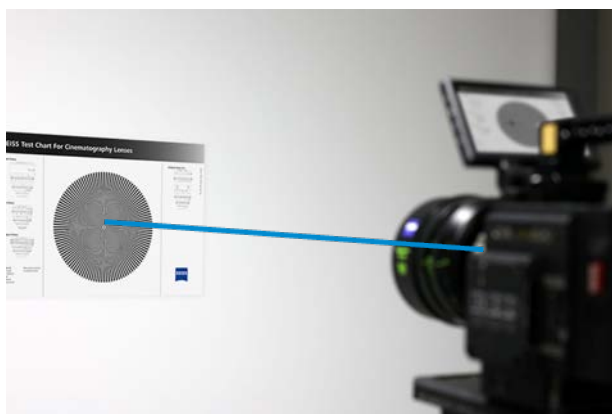
-
9. Make sure that the center of the image aligns with the center of the siemens star test chart.

-
10. Set the focus ring according to the testing distance. See Shimming Table.



The focus setting must not be changed during the adjustment process.

-
11. Obtain maximum image sharpness on the live view by varying the distance between the test chart and the camera.



-
12. Now remeasure the testing distance between the image plane mark on the camera body and the test chart (= the actual distance)



If the testing distance has changed, note the distance. The change indicates that the flange focal distance of the ZEISS Supreme Prime must be adjusted. Proceed with the steps in Correcting the Flange Focal Distance.

13. Do not take down the setup as you will need it again to recheck the sharpness later in the process.

Correcting the Flange Focal Distance

-
1. Remove the ZEISS Supreme Prime from the camera.

-
2. Follow the steps of chapter [Detaching a Mount](#).

-
3. Determine the total thickness of the shims that already lay in the lens groove.

-
4. Increase or decrease the total shim thickness according to the tables in the appendix by using a flat-bladed screwdriver or a pair of tweezers.



Any combination of shims is possible to achieve the required thickness and therefore the desired flange focal distance. Always use the closest possible combination of shims.

Example:

Using a Supreme Prime 35mm/T1.5 lens with an EF mount, scaled in feet and a test chart at a test distance of 4 ft, an actual distance of 4 ft 1' is measured. Due to the table on page 18, you add a silver shim 0.013mm to the total thickness of the shims.

5. Use a flat-bladed screwdriver or a pair of tweezers to remove or add shims.



Handle the shims carefully as they can easily kink or tear which makes them unusable. Ensure that the colored shims lie on top of each other in the groove of the lens barrel and do not cover the screw holes. The shims might otherwise be damaged, while screwing in the screws.

6. Follow the steps of chapter [Attaching a Mount](#) to attach a new mount.

7. Recheck the sharpness of the lens. Follow the steps of testing the sharpness once more.

- a. If the testing distance has changed, follow the steps of chapter [Correcting the Flange Focal Distance](#) once more.
- b. If you achieve the maximum sharpness at the testing distance proposed in the tables, you successfully tested your Compact Prime Supreme Prime. No further steps are required.

In this chapter you learned how to adjust a Compact Prime Supreme Prime

Appendix

Color Code of the Shims

Shimming Table

Minus sign: Enlarge the flange focal distance. → Remove Shims

Plus sign: Reduce the flange focal distance. → Add Shims

Shim color	Thickness [mm]	
Silver	0.013	
Gold	0.019	
Purple	0.025	
Light Blue	0.032	
Red	0.038	
Blue	0.051	
White	0.064	
Green	0.076	
Orange	0.102	
Light Purple	0.127	
Clear	0.152	

Meter distance scale		Feet distance scale	
Distance to test chart [mm]	3000	Distance to test chart [ft]	10
Object distance at best focus [mm]	Change of total washer thickness [mm]	Object distance at best focus [ft]	Change of total washer thickness [mm]
2960	-0,05	9ft 10'	-0,06

2970	-0,04	9ft 10 1/2'	-0,05
2980	-0,02	9ft 11'	-0,03
2990	-0,01	9ft 11 1/2'	-0,02
3000	0,00	10ft 0'	0,00
3010	+0,01	10ft 1/2'	+0,02
3020	+0,02	10ft 1 '	+0,03
3030	+0,04	10ft 1 1/2'	+0,05
3040	+0,05	10ft 2'	+0,06

Mount Change Accessories

Accessories

ZEISS Identification Number

Front Lens Cap Supreme Prime	4047865905114
Rear Lens Cap - PL	4047865900577
IMS LPL - XD eXtended Data – T1.5/135; T1.8/150	000000-2329-934
IMS LPL - XD eXtended Data – T1.5/21	000000-2330-031
IMS LPL - XD eXtended Data – T1.5/25; T1.5/29; T1.5/35; T1.5/50; T1.5/85; T1.5/100	000000-2271-441
IMS LPL - XD eXtended Data – T1.5/65	000000-2271-196

Glossary

Flange focal distance	flange-to-film distance, flange focal depth, flange back distance, flange focal length
Shim	washer
Index mark	aperture indicator, aperture line, aperture mark, aperture index
Flat-blade screwdriver	slotted screwdriver, flathead screwdriver

Carl Zeiss AG
Consumer Products
Carl-Zeiss-Straße 22
73446 Oberkochen Germany
www.zeiss.com/cine