



深入了解老蛙

LAOWA老蛙 MSC
Magic Shift Converter
魔法移轴增距镜

使用手册
Instruction Manual

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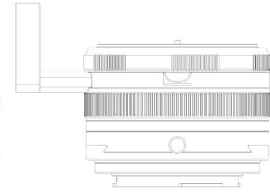
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LAOWA老蛙

LAOWA老蛙

真诚地感谢您选购LAOWA老蛙 MSC
(Magic Shift Converter)魔法移轴增
距镜，为了让您充分理解本产品的使用
方法和注意事项，请您在使用前仔细阅
读本说明书。



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*注：以F-E Mount 为示例

使用说明

- 将本产品座圈红点对准镜头卡口红点，按照卡口旋转方向轻旋镜头，当听见轻微（咔）声，表示镜头已安装完毕。注意：请避免过度用力，导致卡口损伤。
- 本产品可实现360°旋转。按住卡口锁销按钮“F-E卡口”“6”/EF-E卡口“4”，旋转至合适位置，松开按钮完成旋转动作之后可以通过上下或左右移轴，消除透视变形。
- 本产品通过转动移轴手轮可实现±10mm偏移。松开移轴限位手柄“F-E卡口”“13”/EF-E卡口“5”，转动移轴调节手轮“F-E卡口”“4”/EF-E卡口“3”，进行移轴。当偏移至合适位置后，锁紧移轴限位手柄，完成移轴动作。

移轴效果图：



未移轴仰拍



竖拍时上下移轴



移轴后平拍



未移轴仰拍



横拍时上下移轴



移轴后平拍

注意事项

⚠ 安全注意事项

- 使用本产品拍摄时，请避免将镜头直接对着太阳和强光，以防灼伤眼睛或者烧坏相机的CCD/CMOS。
- 在太阳或者强光下，不使用镜头或者安装好镜头的相机时，最好将镜头盖子盖好，以防磨损镜头或灼伤CCD/CMOS甚至引发火灾。

⚠ 使用注意事项

- 产品从寒冷的环境突然转移到温暖的环境时，产品的外部以及内部镜片将会凝结水雾，所以请做好防水、防湿保护。
- 防止强光直接照射、暴晒，过高的温度会使镜片和个别部件伸缩变形，出现不可预计的故障。

- LAOWA老蛙 MSC根据广角镜头特有的像差，采用相互抵消的设计理念，在放大像场面积的同时，也抵消了部分色散和畸变，使产品的性能更加出色。
- 为有效地控制体积，并矫正像差，此镜头采用了4组5枚的光学结构，且包含2枚超高折射率玻璃(Extra Refractive Index)，完美解决了两者间冲突。
- 本款产品的机械结构全部由金属部件组成，确保了镜头的组装精度和耐用性，具有强烈的金属质感。

产品特点

- LAOWA老蛙 MSC(Magic Shift Converter)是针对广角单反镜头设计的，通过放大像场的原理，将普通全画幅广角镜头的画幅由 $\Phi 43.2\text{mm}$ 放大到 $\Phi 60\text{mm}$ ，同时焦距和Fno数值也相应扩大约1.4倍。

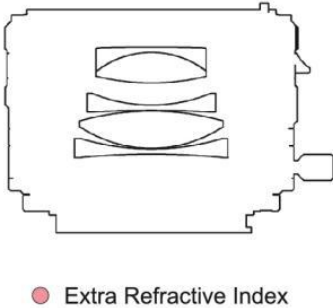
如下图：



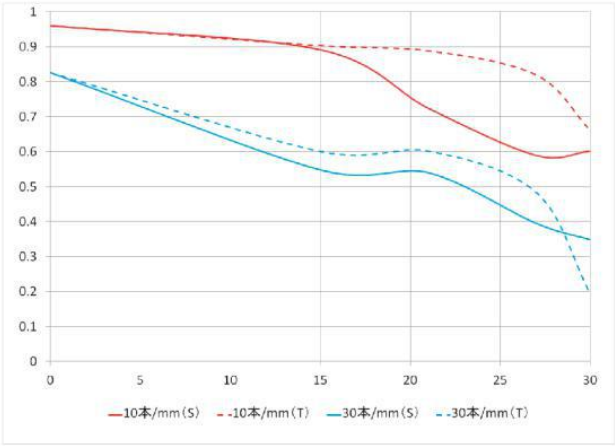
镜头规格

产品编号	LAOWA老蛙 MSC(Magic Shift Converter)
镜头结构	4组5枚（超高折射率玻璃2枚）
卡口	EF-E Mount、F-E Mount
镜头尺寸（直径/长）	约 $\Phi 69.6 \times 44.1$ 毫米
重量（不含罩子）	约360克

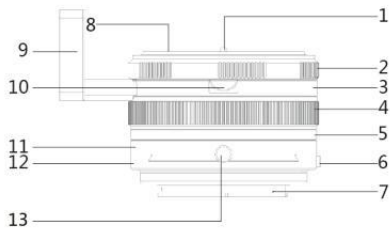
光学结构图



MTF性能图

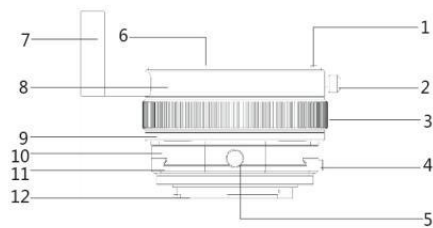


各部件名称



MSC (F-E Mount)

- | | | | |
|-----------|----------|----------|----------|
| 1.镜头锁销 | 2.光圈手轮 | 3.主镜筒底座 | 4.移位调节手轮 |
| 5.移位底座 | 6.卡口锁销按钮 | 7.NEX卡口 | 8.镜头座圈 |
| 9.脚座连接板 | 10.卡口手柄 | 11.移位机构一 | 12.移位机构二 |
| 13.移轴限位手柄 | | | |



MSC (EF-E Mount)

- | | | | |
|----------|----------|----------|----------|
| 1.镜头锁销 | 2.卡口手柄 | 3.移位调节手轮 | 4.卡口锁销按钮 |
| 5.移轴限位手柄 | 6.镜头座圈 | 7.脚座连接板 | 8.主镜筒底座 |
| 9.移位底座 | 10.移位机构一 | 11.移位机构二 | 12.NEX卡口 |

*注：所有图片显示仅用于说明目的，产品由于产品增强可能会有所不同。



WeChat Accounts

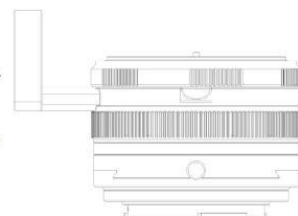


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LAOWA 老蛙

LAOWA 老蛙

Thank you very much for purchasing
LAOWA Magic Shift Converter(MSC).
Please read this manual thoroughly
before use to familiarize yourself with
the instructions of the LAOWA MSC.



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*Take LAOWA MSC (F-E Mount) for an Example

SPECIFICATIONS

- Due to property of aberration of wide angle range lenses, LAOWA MSC adopts a design concept called counteract, which aims to enlarge image circle and neutralize part of chromatic dispersion and optical distortion of a lens. In terms of lens' performance, the LAOWA MSC makes a lens perform rather better than the original lens to some extent.
- It is constructed of 5 elements in 4 groups with 2 pcs of Extra Refractive Index, which contributes to achieve both compact size and remarkable aberration correction control.
- All metal mechanical construction is applied to assure lens' high assembly precision and long-lasting durability. The lens' strong metal texture makes the body feel extremely solid.

Lens Model	LAOWA老蛙Magic Shift Converter (MSC)
Lens Construction(Elements/Groups)	5/4 (2 pcs of Ultra High Refractive Index Included)
Available Lens Mount	EF-E Mount & F-E Mount
Dimension (Diameter X Length)	69.6 X 44.1mm
Weigh (Lens Hood Excluded)	About 360g

PRECAUTIONS

⚠ Safety Precautions

- Do not look at the sun or a bright light source through the lens or camera in case that it may cause damage to your eyesight or CCD/CMOS of a camera.
- Whether it is attached to the camera or not, do not leave the lens under the sun without the len cap attached to prevent the lens from abrasion or concentrating the sun's ray, which could even cause a fire.

⚠ Handling Precautions

- If the lens is taken from a cold environment into a warm one, condensation may develop on the lens surface and its internal parts. To prevent the condensation in this case, keep the lens in a dry environment.
- Do not leave the lens in excessive heat in direct sunlight. High temperature can cause the lens to deformation or malfunction.

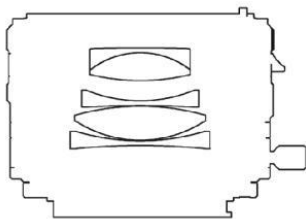
FEATURES

- LAOWA MSC is specifically designed for wide angle lenses, based on the principle of enlarging image circle, so the frame sensor of full frame lenses can be increased by a factor of 1.4, from Φ43.2mm to Φ60mm, so do the focal length and aperture stop.



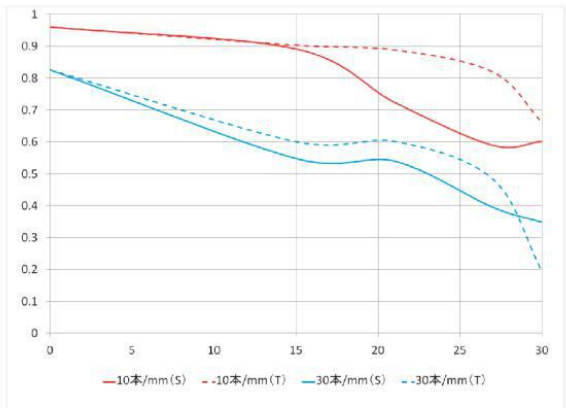
*Take LAOWA MSC (EF-E Mount) for an Example

OPTICAL CONSTRUCTION

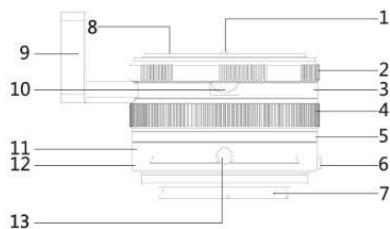


● Extra Refractive Index

MTF CHART

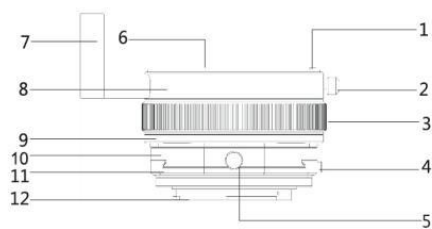


NOMENCLATURE



MSC (F-E Mount)

- | | | | |
|--------------------------------|-------------------------|---------------------------|---------------------------|
| 1.Mount Lock Pin | 2.Aperture Ring | 3.Pedestal of Lens Barrel | 4.Shift Adjusting Ring |
| 5. Pedestal of Shift Mechanism | 6.Mount Lock Pin Button | 7.NEX Mount | 8.Lens Mount Adapter Ring |
| 9.Tripod Quick Release Plate | 10.Mount Knob | 11.Shift Mechanism I | 12.Shift Mechanism II |
| 13.Shift Lock Knob | | | |



MSC (EF-E Mount)

- | | | | |
|-------------------------------|---------------------------|------------------------------|---------------------------|
| 1.Mount Lock Pin | 2.Mount Knob | 3.Shift Adjusting Ring | 4.Mount Lock Pin Button |
| 5. Shift Lock Knob | 6.Lens Mount Adapter Ring | 7.Tripod Quick Release Plate | 8.Pedestal of Lens Barrel |
| 9.Pedestal of Shift Mechanism | 10.Shift Mechanism I | 11.Shift Mechanism II | 12.NEX Mount |

*All pictures shown are for illustration purpose only. The product may vary due to product enhancement.

INSTRUCTIONS FOR USE

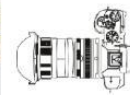
- **How to Attach LAOWA MSC:** Align the red mark on the mount adapter ring of LAOWA MSC with the master lens' mounting index, and then turn the lens until you hear a slight click. Note that please twist the lens gently in case it may cause damage to the lens mount.
- **Method of Shift Function:** The MSC enables photographers to shift horizontally/vertically with $\pm 10\text{mm}$ for up and down shifting to correct perspective distortion. When shifting up and down, loosen the Shift Lock Knob ("13" of F-E / "3" of EF-E MSC) and then twist the Shift Adjusting Ring ("4" of F-E / "3" of EF-E MSC).
- Through the LAOWA MSC, the lens can achieve a rotation for a full 360 degree. Just press the mount Lock Pin Button "6" of F-E / "4" of EF-E MSC), turn the lens to a appropriate position and then loosen the button.

*Note: The numbers mentioned above are stated below in the "NOMENCLATURE".

Shift Effect



Low Angle Shot (Without Shift)



Vertical Shot (Shift Up/Down)



Eye-level Shot (Shifted)



Low Angle Shot (Without Shift)



Horizontal Shot (Shift Up/Down)



Eye-level Shot (Shifted)