

Metering Module of an SLR Camera

Internal Structure



AI Overview

The metering module in an SLR camera measures light through the lens using dedicated sensors, translating it into exposure information for the camera's shutter, aperture, and ISO settings.

Core Components

1. **Light Sensor(s):** In most SLRs, the metering sensors are located in the pentaprism or pentamirror assembly above the mirror box, or in some models at the bottom of the mirror box. These sensors detect the intensity of light reflected from the scene through the lens (TTL metering) and convert it into an electrical signal for processing.
2. **Metering Processor:** The electrical signal from the sensors is sent to the camera's exposure control processor, which calculates the optimal combination of shutter speed, aperture, and ISO. This processor can handle different metering modes, such as matrix/evaluative, center-weighted, or spot metering, depending on the camera model.
3. **Coupling Mechanisms:** In traditional SLRs, the metering module is mechanically coupled to the aperture selector, shutter speed dial, and ASA/ISO preselector, allowing the meter to indicate correct exposure settings via a needle or digital readout. In modern DSLRs, this coupling is electronic, with the processor automatically adjusting settings in auto or semi-auto modes.
4. **Preflash and Ambient Light Integration:** Advanced SLRs and DSLRs can perform preflash TTL metering, where a brief flash is emitted before the mirror flips up. The reflected light is measured by the metering sensors to determine the required flash output for proper exposure. Ambient light metering occurs simultaneously, ensuring accurate exposure even in mixed lighting conditions.

Article Content

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Camera Parts with Diagram A camera is a carefully designed imaging system made up of two main sections: the

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However in Center weighted Metering, camera will also ignore your focus point and will only analyze the light in

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The camera body is the central housing of an SLR camera, holding the parts that control exposure, viewing, film

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As a photographer, it is nice to have a good understanding of the different parts of a camera. It will help you

DSLR Metering Modes Explained

DSLR Metering Modes Explained The metering mode on a DSLR is defined as the method the camera uses to expose the photo.

Digital SLR camera metering modes – SLR Photography Guide

Digital SLR camera metering modes Understanding metering modes is important for every photographer if they are to take correct

Uncovering the Inner Workings of a Camera: A Schematic Exploration

Learn about the inner workings of a camera with a camera schematic. Understand how the different components come together to

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