

# Camera and Lens Compatibility

## C vs. CS

There is currently two lens mounting formats in the CCTV industry: C and CS. The only difference is that CS mounts lens are 5mm shorter in the imager side than C mount.

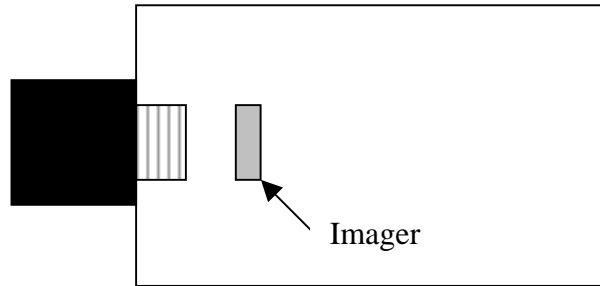


C mount is the older format. CS lenses were original invented as a solution to less sensitive chip cameras. CS lenses originally came without focusing optics; moving the chip in the camera did the focusing. Without focusing optics the lens could pass more light. Most currently available CS mount lenses have focus optics, and have good light passing ability. CS is the most popular.

## Lens Mounting Rules

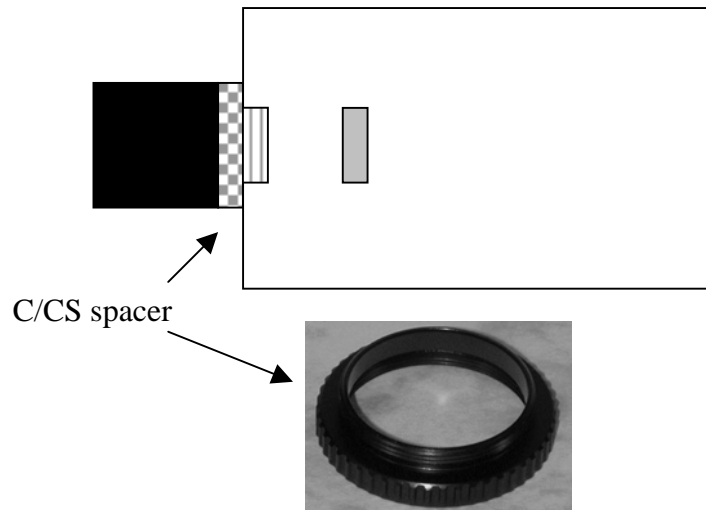
The difference between C and CS mounting lengths can present a problem to the unprepared installer. The problem can be as minor as an unfocusable camera, to as major as a damaged imager. Some simple rules can help avoid problem situations.

## Lens Mounting Rule #1 – Lens And Camera *Same* Mounting Format



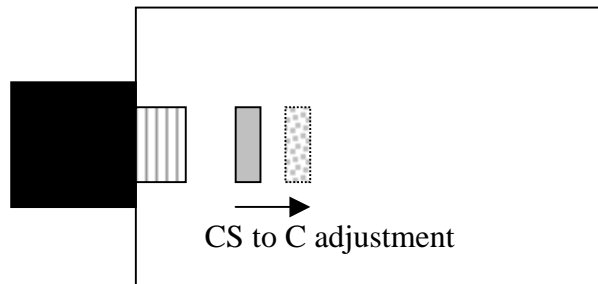
If the camera and the lens are both CS mount, or, the camera and lens are both C mount, there should be no problem.

## Lens Mounting Rule #2 – Lens C Mount And Camera CS Mount



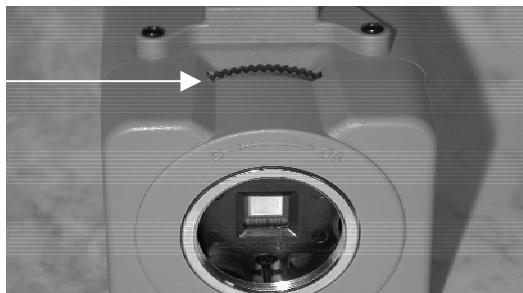
A C mount lens can be mounted to a CS mount camera using a C/CS adapter. A C/CS adapter is a 5mm threaded ring that extends the mounting of the lens. These adapters are commonly available from lens manufacturers.

### Lens Mounting Rule #3 – C Or CS Mount Lens On C/CS Camera

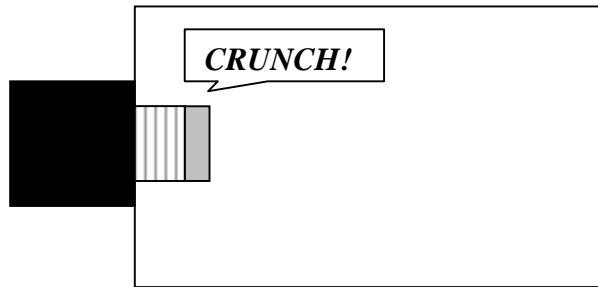


Cameras with C/CS adjustment will accept C or CS mount lenses directly. The adjustment may be a screw on the side of the camera, or a ring on the front of the camera. Both types of adjustment usually have a locking screw to hold the adjustment in place.

C/CS  
adjustment

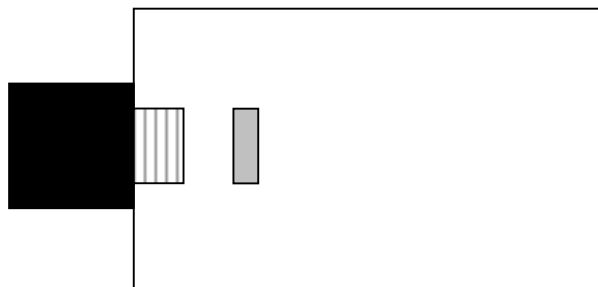


## Lens Mounting Rule #4 - *NEVER* Mount A C Mount Lens Directly Onto A CS Camera



Remember the 5mm difference between a CS and a C mount lens? This difference can create tragic results. Directly mounting a C mount lens to a CS mount camera puts the back of the lens into direct contact with the imager. Gentle contact is not harmful, forcing the lens will destroy the imager and possible the lens.

## Lens Mounting Rule #5 – Don't Mount CS Lens To C Mount Camera



A CS mount lens will mount to a C mount camera physically, and not damage to either device will occur, but you will never be able to focus the camera.

This document is part of a complete book entitled:  
**CCTV System Design & Installation**

By Charles Aulner and Bryan McLane  
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