

## Common mistakes at every shutter speed (and the best settings you should use)

<http://www.digitalcameraworld.com/2012/05/29/common-mistakes-at-every-shutter-speed-and-the-best-settings-you-should-use/>

At a basic level, shutter speed is used to control exposure, but it can also be used as a creative tool that freezes action or adds dramatic blur to moving subjects. However, whenever we venture outside our comfort zone, this is where we encounter problems.

That's not to say we shouldn't do it. All famous photographers will tell you they wouldn't have achieved anything without leaving their comfort zone.



So in this tutorial we'll explain some of the common mistakes you might encounter while trying to achieve the five classic shutter speed effects of freezing movement, blurring action, using blur creatively, long exposures and night photography (to learn about more common mistakes, check out the 99 Common Photography Problems – and how to solve them).

After we look at some of the common problems within these shutter speed ranges, we'll suggest the best shutter speeds for you to use to achieve these effects and offer our best tips for overcoming these errors.

If there are any we've missed, please do let us know in the comments. We'd love to hear from you!

### Freeze Movement – 1/250sec and faster



### Static-looking shots

With all the movement frozen, fast shutter speed shots can look too static. You can try tilting the camera for a more dynamic composition, but the best option is usually to use a panning technique.



Common shutter speed problems: blurred images

### Blurred shots

If you have unwanted blur, then the subject was either out of focus, or it was moving too fast for the shutter speed.

Check that the subject hasn't moved from your AF point. If the blur is down to subject movement, you'll need a faster shutter speed.

### Suggested shutter speeds for freezing action

- Fast-moving cars, motorbikes or animals: 1/1000sec
- Mountain bikes: 1/500sec
- Waves: 1/250sec

### What you can do

Shooting as many frames as possible isn't always the best approach. Instead, try to shoot in short bursts when the action is at its peak.

This provides the best chance of capturing the best images, while allowing the camera enough time to write the images to your memory card without locking up.

### Blur Action – 1/15sec to 1/250sec



Common shutter speed problems: too much movement

If everything is blurred in your shot, try using a faster shutter speed that will capture the subject sharply.

If this freezes all the action then the subject isn't staying in the same position in the frame. This is where your new panning techniques come into play.



Common shutter speed problems: not enough movement

If there isn't enough blur in the background you need to use a slower shutter speed, otherwise your moving subject will look static.

If your shooting situation allows, you should try to alter the speed in small steps so that you can still get the main subject sharp.

### Suggested shutter speeds for panning

- Fast-moving cars, motorbikes or birds: 1/125sec
- Mountain bikes close to the camera: 1/60sec
- Mountain bikes, moving animals or running people: 1/30sec

### What you can do

Using a burst of flash is a great way of ensuring that your subject is sharp when shooting subjects such as cycling and motocross. It's only useful when you can get close to the subject, though, so don't expect it to make a difference to subjects such as motor racing if you're a long way from the action.

### Creative Blur – 1/15sec to 1sec



Common shutter speed problems: overexposure

### Over-exposure

At slow shutter speeds, it's easy for areas subject to large amounts of movement, such as the sea, to create over-exposure.

Take a test shot at the suggested settings and take a look at the histogram (or highlight warning) display to make sure the highlights are correctly exposed.

### Suggested shutter speeds for blurred motion

- Fast-flowing waterfall: 1/8sec
- People walking close to the camera, or waves and slow-moving water: 1/4 sec

### What you can do

In bright conditions you may find it difficult to get your shutter speed below 1/8 sec, even using the smallest aperture and lowest ISO settings.

Fitting a polariser onto the front of your lens is a great way of reducing the amount of light reaching the sensor, allowing you to reduce the shutter speed by half or more.

### Long Exposures – 1sec to 30secs



Common shutter speed problems: camera movement

### Camera movement

Even with the camera mounted on a tripod it can still move, causing the image to blur. In windy conditions, try weighing down the tripod with your camera bag to minimise the movement.

It's also worth checking that the feet of the tripod are on solid ground ([check out our 4 tips for sharper shots when using a tripod](#)).

### Suggested shutter speeds to blur movement

- Moving foliage in gentle wind: 30secs
- Traffic trails: 20secs
- Smooth seas: 15secs
- Fast-moving clouds: 8secs
- Waves, retaining some detail: 1sec

### What you can do

If you're shooting before sunrise or after sunset, the light levels will change quite rapidly. So you'll have to set a smaller aperture (or use a faster shutter speed) as dawn approaches, or as it gets darker after sunset you'll need to use a larger aperture (or

decrease the shutter speed).

For more on how to do this, check out our photography cheat sheet on when to use a small or wide aperture.

### Night Photography – 30secs or longer



Common shutter speed problems: hot pixels

#### Hot pixels

Shooting long exposures can also result in hot (or stuck) pixels. These are individual pixels that appear much brighter than those around them due to their response to light.

Using the long-exposure noise reduction feature helps to reduce the visibility of these in your image, but you can also remove them using the Healing Brush in Photoshop.

#### Suggested shutter speeds for **night exposures**

- Movement just visible in stars, or full moon-lit landscapes: 2 minutes
- Distinct star trails: 10 minutes

#### What you can do

When shooting night photography it's common for shots to have much more noticeable noise than normal. To minimise this problem most cameras have a long-exposure noise reduction feature, which can be activated via the main menu.

But there are times when you shouldn't use it (for more on shooting at night, check out the 12 common errors of night photography – and how to fix them).