

Exploring Color Photography

From the Darkroom to the Digital Studio

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the action for further analysis and study, thereby providing the viewer with a new way of visualizing a situation.

Anticipation and timing are crucial to capture the climax of an event.

Whenever possible, watch and study the action before shooting. Become familiar with how the event takes place. When shooting a stop-action photo select the appropriate vantage point and lens, then preset both the exposure and focus, taking care to use the smallest aperture to obtain maximum depth of field. A wide-angle lens allows more room for error because it has more depth of field at any given aperture than a normal or telephoto lens.

The telephoto lens can be used to isolate the action. A minimum depth of field separates the subject from the background. Prefocusing or using auto-focus lock becomes critical, because any inaccuracy results in the subject being out of focus.

The shutter speed needed to stop motion depends on the speed of the subject and its direction and distance from the camera (table 14.1). The nearer the subject or the longer the lens, the higher the shutter speed needs to be. A subject moving across the frame requires a higher shutter speed than one approaching head-on or at the peak of its action.

Table 14.1 Shutter Speed Needed to Stop Action Parallel to the Camera

1/125 second: most everyday human activities, moving streams and rivers, tree in a slight wind.

1/250 second: running animals and people, birds in flight, kids playing, balloons and kites, swimmers, waves.

1/500 second: car at 30 miles per hour, bicyclists, motorcyclists, baseball, football, tennis.

1/1,000 second: car at 70 miles per hour, jet airplanes taking off, skiers, speedboats, high-speed trains.



Armstrong makes collages of found photographs, colored papers, and reworked Xeroxes that he rephotographs at various distances, using slow shutter speeds, with the focusing ring of his camera set at infinity to intentionally blur the collage into an integrated, seamless image. "This sleight of hand allows me to conjure a mysterious *tromp l'oeil* world that hovers between the real and the fantastic. The nature of visual perception intrigues me: how the eye continually tries to resolve these images, but is unable to do so, and how that is unsettling. This technique enables me to blend and distill hues, creating rhapsodies of color that are meditative pieces—glimpses into a space of pure color."

© Bill Armstrong, *Untitled, #11*, 1999. 18 x 24 inches. Chronogenic color print.

Dim Light and Flash

In dim light, flash rather than shutter speed can be used to stop action. The ability to stop movement is dependent on the duration of the flash. A normal flash unit usually gives the equivalent speed of between 1/250 to 1/500 second.

Fractional power settings can supply much faster times, up to 1/10,000 second.

The Blur and Out-of-Focus Images

The blur and out-of-focus images are as inherent to photographic practice as those that are clear and crisp. The blur interjects the suggestion of movement into the picture. This bends the traditional concept of photographic time, producing a *miasma* image capable of representing a sense of the past, the present, and the future. The blur can eliminate traditional photo-

graphic detail, revealing a subject's physical and emotional essence. The blur destroys the notion of a discrete parcel of framed time depicting the past. The blur can provide a sense of suspension in the eternal process of becoming by confronting viewers with change itself. The lack of focus frees the images from the confines of photographic exactitude by offering a different representation of reality.

Begin your experiments by determining what shutter speed is needed to stop the subject's movement in relation to the camera position. A slower shutter speed causes more blur and consequently more contrast between the moving and static areas. This can isolate a static subject from its surroundings. Consider which details are crucial and need to be retained. Decide whether it will be more effective to blur the background or the subject.