

Technical Note

Using a Grid System for the Documentation of Bloodstain Patterns

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Abstract: Bloodstain patterns can be documented by establishing a simple grid using strings. Once the grid has been established, photographs are taken of the individual grid units. Reconstruction of the bloodstain pattern can then be made using the developed photographs.

Introduction: When doing a bloodspatter interpretation, there is no replacement for actually being at the scene for the interpretation. This method is intended to assist in the documentation of the scene. This documentation can then be used to reconstruct the scene for an investigative briefing, review by a trained bloodspatter expert, or courtroom testimony.

A grid can be set up using strings and photographs are taken of each grid. The photographs can then be developed on the appropriate sized paper and the scene reconstructed.

Equipment:

- A 35mm camera with a 50mm lens and flash
- Tripod (Recommended)

- Angle level (Recommended)
- String
- Tape measure/Ruler
- Tape
- Step stool/Ladder

Method: Using strings and a measuring device, establish a grid system in the largest practical ratio to encompass the entire bloodstain pattern area (Figure 1). A 12”x18” rectangle is the largest size that still allows enough spatter detail for measurements (Figure 2).

Different scenarios will require different ratios. In the example of a wall in a room where one can stand several feet away (Figure 3), the large ratio can be used.

In a situation, such as a hallway (Figure 4), when you can only stand a couple of feet away, this may need to be reduced (i.e. 4”x 6” or 8”x12”). Number the rectangles so that when the pictures are developed the order of the grid can be reestablished. Take photographs of each rectangle within the grid, making sure the strings are still visible and parallel at the outer edges of the viewfinder. This insures that the entire image has been captured and that the camera is perpendicular to the rectangle. If not, the image will be skewed (Figure 5).

Print the images out as a 1:1 using the strings as a reference. Afterwards, the images can be placed together and should accurately reflect that particular aspect of the bloodstain pattern.

This method is not limited to walls, ceiling or floors. Figure 6 - shows an example of bloodspatter on the side of a computer cart. A grid was set up and photographed. The photographs were taped to the side of a box, which would represent the computer cart.

Future Studies: Compare the reproducibility of impact determinations such as points of convergence and stringing of the impact sites determined at the original scene to the reconstruction with photographs.

For further information, please contact:

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Figure 1



Figure 2

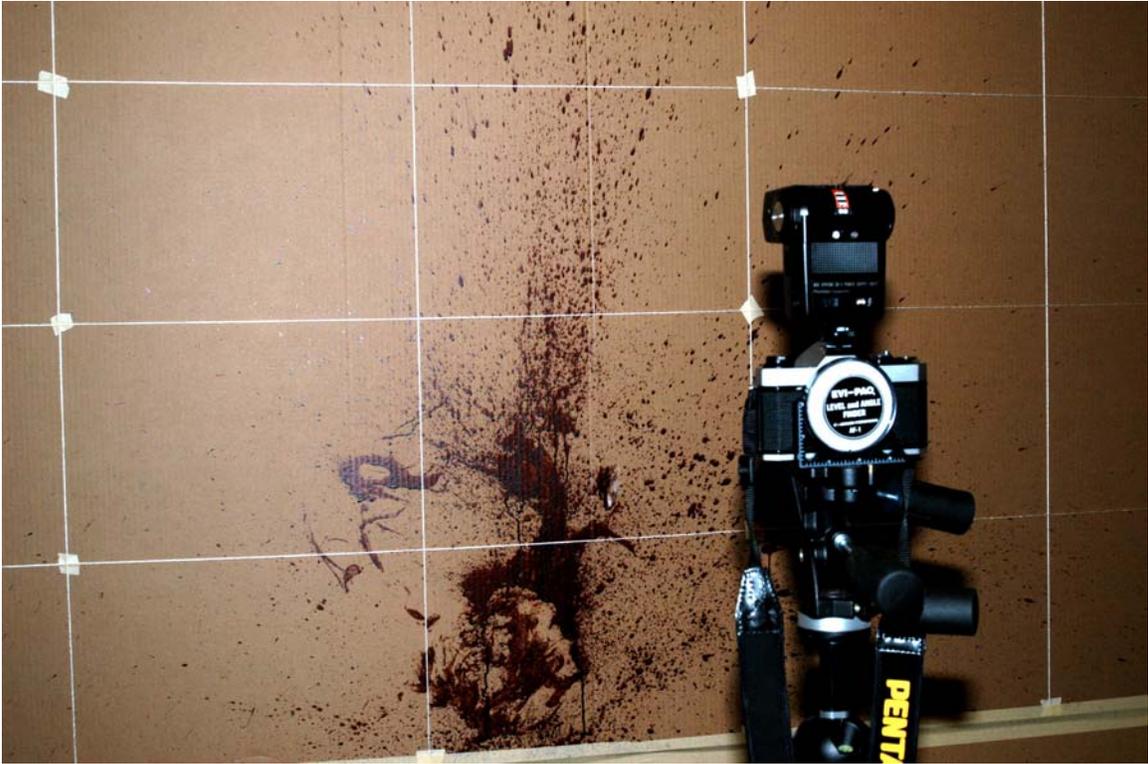


Figure 3: 12" x 18" grid, 3' from wall



Figure 4: 4" x 6" grid, 1' from wall



Figure 5



Figure 6





