

## **Silver Problem, Digital Solution**

*Photographs by Ron Rosenstock*

*Text by Ron Rosenstock and Donna Dufault*

### **The Image**

In the fall of 1985, I was photographing on a hillside overlooking the islands in Clew Bay, one of my favorite locations on the west coast of Ireland. In Irish, the area is called Rossbarnagh, and from its vantage point at the head of the bay, you can see approximately thirty-five of the bay's purported 365 islands. I often refer to it as the "sunset place", as it is a prime location for stunning sunsets when the conditions are right. The evening I made this exposure, I was shooting with my 5 x 7 Deardorff camera with a slightly long lens, the 240 mm Fujinon. It wasn't a spectacular evening, just one with lots of moving clouds. I decided to see how the image would look if I had a very long exposure. Often moving water leaves wonderful traces of the path it has taken. I decided to try out that idea with the slow moving clouds.

At the time, I was shooting Ilford FP4 5 x 7 sheet film, which I rated at ASA 64. It was early evening and the light was very low. A normal exposure would have been f.8 at 1/4 of a second. At f.45, the f-stop I used, the shutter

speed would have been eight seconds for the normal exposure. To increase contrast, I used a #29 red filter that required four more units of light. That brought the exposure time up to 128 seconds. With reciprocity failure, as well as the slowly fading light, the final exposure required 10 minutes. I had wanted to make a second exposure, but by the time the first exposure was completed, the light was too far gone to achieve anything close to my original exposure.

### **The Silver Problem**

A few weeks later back in my dark room, I processed the negatives from my Ireland trip. The negative made at Rossbarnagh looked terrific. In fact, it far exceeded my expectations. The slow movement of the clouds during the 10-minute exposure resulted in a visually exciting pattern with good contrast. I was delighted and anxious to start printing.

The contact print looked promising so I began working on a 16 x 20 enlargement. In the dark room, the print looked fantastic. However, when I viewed it under natural light, my enthusiasm was dashed. Up until that moment, I had failed to notice several black dots and two black squiggly lines in the sky. I guessed that there were a few specks of dust in the film

holder when I exposed the film. It was obvious that this was not going to be the beautiful print I had imagined.

### **The Digital Solution**

Time went by and I forgot all about the print until I began working on my book, *Hymn To The Earth*, a collaborative project with the Irish poet, Gabriel Rosenstock (no relation) that was published in 2003. The idea for the book was to present images from around the world that reflected my reverence for our planet. Each image was to be accompanied by Gabriel's poetry. After receiving prints of the photos chosen for the book, Gabriel composed poems that were inspired by the images.

To produce *Hymn to the Earth*, the 8 x 10 prints of the chosen images were scanned with a high resolution scanner. Working side-by-side with the digital printer, I was able to ensure that the final digital images matched my original work. In reviewing my files of images for inclusion in the book, I came across the print of the clouds taken at Rossbarnagh. I felt the photograph would work well in the book, and knew that the defects could be corrected digitally. The digital printer had no problem removing the defects with the help of Adobe Photoshop. At last I had a defect-free print of the

image. The photograph titled, *Islands and Clouds*, Ireland, 1985 inspired Gabriel Rosenstock to write the following verse:

The Isles of the Blest?  
mere rumour in the wind  
confounded by whale-song

I was delighted that I could utilize the image in the book, but still could not produce an exhibition quality silver print of it in my own dark room. The black spots and lines on the original negative hadn't disappeared.

While working on the book, I learned of a way that a continuous tone negative could be produced through digital technology. The process involved something called LVT or Light Valve Technology. Autumn Color Digital Imaging, a company in my area of Massachusetts, had the LVT technology and was able to make a perfect new negative of my image, *Islands and Clouds*. For more information about Autumn Color Digital Imaging and their services, I encourage you to visit their website at [www.AutumnColor.com](http://www.AutumnColor.com).

To better understand LVT, I asked Donna Dufault at Autumn Color to explain the process. Below is what she wrote:

### LVT Digital Film Output

When you have a digital image or an original piece of film you want made into a slide, photographic transparency, or negative film, you need access to a film recorder, sometimes called a LVT. During the last 15 years or so technology has changed, films have disappeared, and we now are faced with the digital age and pixels, instead of grain. We have been able to bridge the gap between digital and traditional photographic processes with LVT, or Light Valve Technology Film Recorders. They offer us the capabilities to produce truly continuous tone films on stable silver media. LVT film recorders allow us to image your file directly to transparency or negative film in your choice of color or black and white, from 35mm up to 11" x 14". Digital film recorders use electro-optic modulators (known as "light valves") to accurately control the amount of red, green, and blue light exposed for each pixel. Images are exposed one pixel at a time, ensuring exact sharpness. It resolves more lines per mm than film can render--resolutions of 8,000 lines or higher for imaging on any size film.

Although it has the capability of producing high quality digital files on continuous tone films, the LVT requires certain image parameters in order to achieve optimum results when outputting to film. Different LVT recorders have different specs. So always check with whoever is making them to be sure you have the correct specifications before setting up a file for output.

Just as in a traditional photographic system, the protocols of imaging apply in the digital arena. We can scan from your original negative or chrome films. Scans are made on Optronics Color-Getter drum scanners with optical resolution up to 8000 dpi. The pulsed xenon light source and PMT light sensors yield exceptional shadow detail. Originals 11" x 14" and smaller are fluid mounted to minimize the effect of scratches, abrasions and dust.

Sharpening is applied during color correction so that it can be adjusted to the requirements of each original. A calibration is applied to each digital file to eliminate the need for manual color correction for basic scan quality. No automatic dust or scratch filters are used. Dust and scratches are digitally removed by examining the digital file at high magnification and cloning out defects. Once the scan is complete and the digital file has been optimized we can set it up to create the LVT. QuarkXpress, Freehand, Illustrator, and Photoshop can all output to a LVT. The resulting film, color or B&W, can

be developed and used for traditional photographic printing. Both the LVT and the film processor are calibrated daily to exactly, predictable tolerances. Film is processed to museum archival standards.

Pros: The creation of new digital negatives solves the difficult problem of safe handling of originals. Valuable originals can be maintained in long term storage (as they should be) without fear of abrasion or accidental damage.

Many of our professional digital photographers are archiving their finest images to film. Photographers and artists have stated that archiving to transparency film gives them a secure feeling for the future.

If you need major changes to your originals, you can make them in Photoshop then output to film to have the “perfect original”. With a “perfect original”, traditional printing becomes much easier– no more spotting, burning, dodging, or mask making.

LVT film output is commonly used for large display prints for trade shows, and high-end portfolio and stock images.

Cons: LVT's are very expensive, and the price for their use is correspondingly steep. Turnaround times can be up to 3-4 weeks.

### **Final Thoughts**

Eighteen years after I made the exposure of *Islands and Clouds*, a digital process came along that resolved the problems with my original negative. Without the digital solution, I would never have been able to produce a silver print without the visible defects in the sky. For me, it was worth the \$200 fee to reclaim an important negative. I generally make 16 x 20 prints of my work at which size the defects were most noticeable. On smaller prints, they were visible but less bothersome. For the purposes of this article, I traced over the defects with a pen to increase their visibility. Thanks to Autumn Color, the new negative is defect free and easy to print. While fixing the spots, they even burned down the upper left hand corner for me!

*Ron Rosenstock has been teaching and leading photo tours since 1970. He is a regular contributor to View Camera magazine. For more information please see: [www.phototc.com](http://www.phototc.com)*

