

Out of the Dark...Part 2

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Professional photo labs are faced with "fixed costs" and "variable costs". Since 1977, the cost increases of "fixed cost" items, necessary for running a photo lab, have been astronomical and include such expenses as average monthly utilities, space leases or property mortgages, management wages, accounting costs, etc. In fact, in the desert southwest, I have seen the total monthly utilities of one photo lab increase from about \$1,000 per month to over \$4,000 per month for the same amount of space! These increases in the "fixed costs" of running the photo lab business have to be made up somewhere. Generally, these costs are balanced against the "variable costs", such as materials used, material waste, machinery purchases/leases, machinery maintenance, and production labor costs. Material costs, alone, have increased as much as 300% to 500% and even higher for some specialty materials. Photo lab machinery has become more dependable and more sophisticated but, again, at a significantly higher cost. Lab owners have to very carefully balance the desire for, and the need for, new equipment against the costs of maintaining and operating older equipment. Consider this, a brand new, 52" wide roller-transport color print processor cost about \$20,000 in 1979. Today, a 52" wide roller-transport color print processor may cost upwards of \$80,000 plus.

To remain in business, the photo lab owner must control the variable costs carefully. The cost which is the most variable and over which the owner has the most control is labor. The number, experience, and quality of the photo lab technicians directly affect the quality of the service and products produced by the photo lab. However, as customers expect higher quality products and higher quality services, the necessary labor costs increase. All too often, the customer balks at paying the prices that such products and services require. The photo lab owner is in a constant struggle to balance the realistic needs of the customer against the production labor costs to meet those needs. Compromises between the customer and lab are certainly required.

Of all of the photo lab complaints I hear, the two top issues are scratched, damaged, mis-mounted or lost film, and type R or Ilfochrome prints that do not compare favorably to the original transparencies. Truly, the quality of these services is dependent on the expectations of the customer and the realistic abilities of the photo lab to meet those customer expectations. Knowing some of the background of how these services are provided will help you understand how these issues arise. I'll begin with film processing.

Mail order or local photo lab-either choice presents similar risks. The best quality photo labs will use "dip and dunk" film processors to minimize physical contact between the film and machinery. The only difference between a local photo lab and a mail order photo lab is the volume of film processed in a day. Generally, the local photo lab will have a film processing capability from 1,000 to 4,000 rolls per day, whereas the mail order photo lab will be able to handle 10 times, or more, rolls per day. A local photo lab may be able to offer some more post-processing options due to the lower volume but do not be led to believe that a local professional photo lab will necessarily offer a significantly more "personal" service. The film-processing department is expected to be a high-profit department. High volume with a minimal "turn around" time, controlled labor costs, and maximum profits are the ultimate goal of the film-processing department.

The large "dip and dunk" film processors are remarkable machines capable of high volume processing. Film is loaded onto special racks by doubling the roll over special spindles so that only the edges of the film touch the spindles. Film racks can hold from 10 to 20 rolls of film per rack and each processing chemical tank can accommodate, on average, 5 racks. At any one time in the process, a single chemical tank may contain 50 to 100 rolls of film. Timing on the processors is held consistent through the use of modern electronic timers to guarantee accuracy and the best of processors can keep independent times of individual racks for "pushes" and "pulls". Chemical temperatures are held to within 0.1°F. Powerful mechanically driven "lift" arms move racks of film from tank to tank by lifting the hanging film out of one tank, over the tank separator, and lowering the hanging film into the next tank of chemicals. All in all, the process is a continuous ballet of precisely timed and integrated motion.

As automated as the machinery has become, there is still plenty of handwork involved in the processing of film. Human hands mark the rolls (using "twin tabs") to the proper order for order tracking. In total dark, technicians extract the rolls of film from their canisters and load the film onto the proper racks, set the tabs at the top of the racks for the proper processing times, and, eventually, load the film racks onto the proper processors. Typically, few photo labs actually use infrared viewing devices in this phase of processing. It is too easy to forget to turn off these devices off when processing infrared sensitive films! After processing and drying, the processed film is removed from the racks and the film is then hand packaged according to the desires of the customer.

Of course, machinery can break down. But machinery that has been maintained properly, utilizing regularly scheduled maintenance practices, seldom breaks down. If your lab is consistently blaming “processor failure” for damaged and improperly processed film, seek out a new photo lab. Improper processor maintenance can also cause **irregularly** scratched film from chemical buildup at the tops of chemical tanks. Film can have black spots of excess chemical tars that can be removed but result in undeveloped black spots in the film. “Lifts” occasionally do get misaligned during periods of high volume processing. Electronically controlled drive motors can utterly fail without notice. Regular machine maintenance can go a long way to minimizing these situations. Remember though, the photo lab is driven by the “bottom line” and the need to maximize profits. “Down time” due to maintenance is costly and not all labs have regularly scheduled maintenance procedures, preferring to fix machinery after a problem occurs. Not all labs do this, but certainly a large enough number do. When processing machines break down, it is staggering the number of rolls of film that are damaged! Consider that the average reversal film (E6) processor will have upwards of 12 chemical and wash tanks, the potential is there to ruin anywhere from 120 to 600 rolls of film with a single break down!

Technician’s errors do account for most film damage. Films can be removed improperly from the canisters causing scratched film, film may be loaded on the wrong film racks, timing tabs may be set incorrectly, racks may be mounted crooked on the lift arms, etc. Employee training is the utmost of importance. As I have discussed previously, however, at about the time a technician is properly trained, “seasoned”, and has become an efficient member of a production team, either the employee leaves for “greener pastures” or may be “rif’ed” to keep labor costs contained. In my experience, most local professional photo labs work with 3 to 4 person processing “teams”. One technician logs the film into production and is responsible for “twin tabbing” the film for order tracking and is responsible for sorting films to be processed down the proper processor. A second technician loads the film onto the film racks, is responsible for setting the proper processing times for each rack of film, and is responsible for putting the racks of film on the proper processor. The additional two technicians are responsible for properly packaging the customer’s film. Often, team members are cross-trained on all of the responsibilities to avoid “burn out”. Large mail order photo labs will have double or more the number of technicians on the teams.

Because the very nature of film processing eventually gets extremely repetitive, underpaid film technicians are treated as “grunt” workers by many photo labs. Technician “burn out” and turnover is very high, with many leaving film processing after their first year or at some time during their second year. The job demands an extremely high attention to detail but, at the same time, the repetitiveness of loading film onto processors and packaging the film offers very little in the way of mental stimulation for the technician. Technician turnover is so high that few technicians remain in a film processing position long enough to reach ultimate efficiency.

However, not all film damage is controllable by the professional photo lab and its technicians. Quite a few problems are caused by the careless treatment of film by the customer himself. Of special concern are those customers who load their own bulk 35mm film canisters. As I mentioned, before, rolls of film are doubled over the film hanging racks. Special weighted clips grasp the free ends of the film, separating the film ends, and adding enough weight so that the film does not slip off of the spindles and the film will dip straight down into the processing tanks. So many times, because the length of the 35mm film loaded in a reloadable cartridge is so much longer than a standard 36 exposure roll of film, the film clips catch on the tank dividers while being transported from one chemical tank to the next. The results are disastrous! Not only does this rack fall off of the lift arms but it will cause other racks to fall, too. Easily 100 rolls of film can be damaged by one roll that is too long! Just because you **can** load more film on a cassette doesn’t mean you should.

Of course, photo labs, large and small, have procedures to check the length of the film being loaded but, as careful as technicians are when handling film, some overly long rolls are missed due to a variety of reasons. **It is the customer’s responsibility to load the proper length of film in the cartridge.** Be sure to tell the counter person that the film has been loaded from bulk rolls and be sure to tell the counter person the type of emulsion. Not all reloadable cassettes are marked as “reloadable” or “bulk”. Many popular film brands, such as Fuji and Ilford, are packaged in cassettes that can be reused. So many times the film in the canister doesn’t match the markings on the canister and the technician is unaware that the film may be too long and may even process the film through the wrong processor. This is why so many photo labs are increasingly reluctant to process bulk-loaded 35mm film.

Customers bring in film that has been accidentally immersed in other liquids. Normally, this doesn’t pose a great threat, but sometimes the liquid is not always compatible with the processing chemistry. I have had customers “swear” the film was dropped in water when, in fact, it was dropped in gasoline! Gasoline evaporates quickly and may not leave a lingering odor, but gasoline leaves behind a film that can destroy several hundreds of dollars of chemicals, not to mention any other customer film processed at that time! Customers leave film with damaged sprocket holes. Small pieces of film drift off into the chemicals and adhere to other customer’s film. The list is endless. Very often, your damaged film is due to the negligence of another customer!

Most, not all, mis-mounted 35mm slides can be traced back to some problem caused by the customer or the customer’s camera. The spacing of 35mm images on a roll of film has been an industry standard for I don’t know how long. Nearly 99% of all 35mm

cameras advance from one image to the next image leaving an industry-specified gap between images. Slide mounting machinery is set to that industry specification. The technician running the slide mounter aligns the first frame on a roll with registration marks on the slide mounter and the mounter “automatically” mounts the whole roll of slides in the holders. With the volume of slide mounting a photo lab performs each day, it is impossible and unprofitable for the technician to watch each and every roll to be sure that all slides are registered properly. In many photo labs, one technician will be responsible for mounting slides on three slide-mounting machines at the same time.

Customers will pull a roll of film out of a camera before the whole roll is exposed. That roll will then be reloaded later and the rest of the images on the roll will be spaced differently. **This is not a normal photographic practice and cannot always be anticipated by the lab technicians.** Even if the customer forewarns the photo lab that this was done, the customer must expect that some of these rolls are going to be mis-mounted. Any photo lab will do their best to accommodate these customers, but production cannot be slowed down or halted just because a customer decided to use a **non-standard photographic** technique.

Owners of manual advance cameras just love to crank on that film transport lever and squeeze out one more exposure on a roll of film. These customers are creating their own problems. This procedure dramatically increases wear on the transport gears and, more often than not, rips the sprocket holes on the film. Film with sprocket hole damage cannot be mounted accurately and is not the fault of the photo lab. Worn transport gears do not evenly space the images on the roll and the slides will be mounted unevenly in the slide mounts. Owners of newer motor-advanced cameras are not off the hook, either. Check an un-mounted roll of film from time to time to be sure the transport mechanism isn't wearing out and causing uneven spacing of the images. **It is the customer's responsibility to maintain the camera in proper working order and the customer cannot expect the photo lab to always catch these problems.**

In the last installment of Out of the Dark...Part III, I'll tackle the issue of print quality and sum up the state of our professional photo labs. It isn't as glum as it appears!

Editor's Note - Visit Tom's online resource of photographic information at www.reasonableexpectations.com.

Tom Webster - NPN 480

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