

# Pro8mm

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## Past, Present, and Future

**P**hil Vigeant knew nothing about the lab business when he bought Film Service Lab of Boston in 1985. As the new owner of Cambridge based Super 8 Sound™ for only a little more than a year, he was concerned that the close of the only local Super-8 lab in the Boston area would be highly detrimental to his business. So, after randomly hearing from one of his clients that there would be a going-out-of-business auction at Film Service Lab the very next day, he decided to attend. Only a handful of students from Mass College of Art were there, planning to bid on a few odd splicers and projectors. Phil called wife Rhonda to ask how much money was in the company checking account. When she told him only \$4,000, Phil thought he would take a chance and offer the entire amount to purchase the company. Initially, the auctioneers grimaced when the cocky 27-year-old offered to buy the entire contents at the opening of the auction, but after an hour of disappointingly low bids on individual items, they stopped the auction, pulled Phil aside for a conference and took his offer. Along with the equipment, Phil asked if head lab employee Bob Hume would move across the river

to Cambridge and run the processing. Without a plan, or prior consent of his landlord, Super 8 Sound™ was now in the processing business! It cost more to move the enormous equipment across town to the basement of Super 8 Sound™ at 95 Harvey Street, Cambridge, than the equipment cost. And that was the beginning of a new era for the company known for inventing Double System Super-8, and the inevitable evolution to what was to become Pro8mm.

### The Past

Since the main business at Super 8 Sound™ was selling Super-8 equipment, the lab's priorities were focused on Super-8 processing, foregoing 16mm and 35mm. The processing machines were customized to enhance the quality for Super-8 film. At that time, most processors used hard plastic rollers to guide the film through the machine. This was too abrasive for Super-8, and often scratched the film. Machines were converted over to protective rubber tire soft touch rollers. This made great improvements in the processing, and virtually produced scratchless Super-8 film. Super-8 contact prints in both black and white and color, and sound striping services were also available. Unlike most labs that processed at night, film was run during the day

so that same day service could be accomplished for both walk-in and shipped-in jobs. This way, clients could expect their film to be shipped out the same day it was received. The daily runs included black and white reversal film, Plus X, Tri X, 4X and VNF Ektachrome.

Having an on-site lab at the same location as the equipment and film stock was a vast improvement. If someone needed to test equipment, one simply ran a film test downstairs, and in a few hours had the results. Customers had only one stop to make to get supplies and services. The integration of the film process made it possible to support filmmakers and school programs more completely. Filmmaking is an integrated process, and the more you know about the components, the easier it is to solve problems and expand capacities.

The second Super 8 Sound™ office opened in Burbank, CA in 1987. In the first years, film was sent from Burbank to Cambridge daily, or in some cases, when the client needed it faster, other LA area labs were used. This went against the grain of the company's philosophy, because one couldn't control the quality of what the outside labs were doing. Eventually, the volume became significant enough that more processing work was being generated out of the Burbank office than the Cambridge office. So, in early 1991, executing the Phil Vigeant entrepreneurial style, he bought out a failing processing lab in Camarillo, California and set up the new lab facility in Burbank while still operating the Cambridge lab. When everything was ready to go, one lab was closed and the other opened. Employees were moved from Cambridge to Burbank, and the company never missed a day of processing.

In 1992 Super 8 Sound™ purchased Rupert Taylor's Telecine Transfer and Sound Striping Services. Rupert operated a film chain based on the Sony BM2100 projector connected to a three chip video camera that produced (for that era) some amazing film-to-video transfers. Integrating transfers



*Previous Page:* Inside the ECN2 processing machine

*Top:* Digital Mastering Suites at Pro8mm. This DM1 Room was updated in 2004 with the Digital Deflection system.

*Above:* The newest DaVinci Color Corrector, The DaVinci 888 Dui System. Some of the advancements of this system are a visual monitor that displays all aspects of correction including a reference frame for every scene.

added a new layer of support because the process could be monitored from start to finish. A customer could bring in film and have it processed and transferred at the same facility, which provided both great efficiency and the ability to quality control the complete process. A lab technician can only look at the physical film to make decisions about problems. Test strips are run to check the chemistry, of course, but the technician can't sit and watch every roll. By doing the

transfer, every roll can be checked and it can be determined exactly how all of what came before affected the final output. If there is a camera problem, it can be seen in the transfer and can then be reported to the camera techs. If there is a processing issue, it can be seen in the transfer and discussed with the lab tech. The service of doing transfer work is only part of the value, as it also becomes the ultimate "QC" station of what is going on.

During this same year, experimentation began with Super-8 Color Negative, which has come to be known as Pro8mm Film. Because this was a new product, a new film processor had to be invented to handle the material, so a prototype ECN-2 Super-8 processor was built. The invention of negative Super-8 film took almost a year to complete and required the invention of many manufacturing components to bring the product to market. Processing Super-8 negative is a great challenge because the standards for cleanliness are so much higher than with reversal Super-8 film. Dirt on the film in positive (reversal film) is black and often hides itself in the underexposed black area of the film. Dirt on negative film, however, is white and has no place to hide. To have a clean negative, perfection in the processing and film handling must be achieved, and every procedure must be immaculate, as any contact with dirt will be so obvious on the film. For example, the negative film leader has to be made in-house; or otherwise the dirt on the white leader will trail onto the film as it is run through a telecine transfer. Any time negative film is spooled, it is run through a cleaning process of particle transfer rollers. These PTR rollers are essential to keeping surface contamination off the film, and therefore they are on every machine that touches negative film, and they must be cleaned constantly. Early results in 1993 were disappointing, but the company did not give up and kept at it until the chemistry was perfected, and today Pro8mm has become a Kodak Award Winning Lab of Excellence for seven years in a row.

The idea of negative Super-8 film is very exciting because it offers filmmakers who want to use Super-8 expanded opportunity to learn the creative film process. Nearly 99.9% of all professional work in film is done on negative film. So if one is trying to learn industry standard filmmaking, then it should be with negative film. It also gives the company a way to keep incorporating new film technology. When one of the major film manufacturers introduces a

new stock, it is tried and compared to what already exists. Knowing film stocks is critical to being a good Director of Photography. It is not uncommon for members of the ASC to use the Pro8mm services for this kind of experimentation and for their continued education, since the cost of a test in Super-8 is minimal compared to the cost of shooting a full-length feature in 35mm. Super-8 negative is fantastic for this testing and experimentation because it results in such a magnification of the film medium.

In 1996 the first telecine suite was set-up, which is now referred to as a Digital Mastering Suite. The suite is a room filled with all the tools you might need to do a broadcast quality transfer, set up comfortably around a monitor and technical monitoring equipment. It was a major breakthrough as it finally gave control to the technology that was so instrumental in getting the Super-8 negative to digital. It also lent control to the way transfers were to be done, opening the door to a variety of more professional types of services.

Film transfers are done in two distinct ways: one-light and scene-to-scene. For a one-light transfer, the machinery is set up and the film looked at for the first few feet to get a good base, and then is let run with only minor adjustments. A scene-to-scene transfer on the other hand requires someone to go through the entire roll of film and make corrections to each and every scene. The DaVinci computer logs all this information with frame accuracy, and then transfers the film with these corrections while recording to tape. Today, everything is done scene-to-scene in the professional world. The quality of doing digital mastering work this way is so superior to using the film chain that the film chain in use was put to rest permanently.

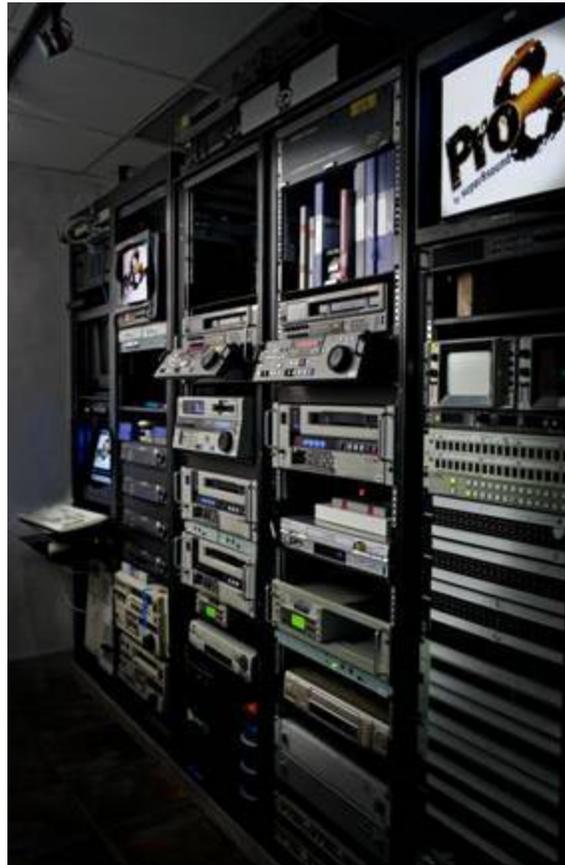
### The Present

Today Pro8mm uses a Rank with the ability to scan at hundreds of speeds from as slow as four frames per second to over one hundred

frames per second. The Rank also incorporates Digital Deflection which allows full frame control, as opposed to just an X-Y and zoom. The image can be rotated 360 degrees. A Time Logic Controller (TLC) allows the ability to control the Rank with other devices (such as tape decks or DAT audio) and synchronize the recording. A film can be precisely placed on a video tape to establish an A-Frame edit for feature film work. The TLC will produce a Flex File list that will list out all the in-points when you are doing sync dailies.

different outputs and recordings.

Pro8mm processes film same day, every day, including all the Pro8mm and Pro16mm Negative stocks, black and white and Ektachrome Reversal. Push and pull processing, cross processing and skip bleach are offered. Rush service options allows the possibility (it's actually fairly common) to get in a job before 10:00 AM Pacific Time, process, prep, and transfer it and then get the job shipped out the same day for next day delivery anywhere in the USA.



*The upgraded video control room, built in 2004*

The video control room today has all data running to it in SDI serial digital. It is done with a 16 by 16 router that can take 16 sources and simultaneously send them to 16 outputs. This allows a single source in one of the Digital Mastering rooms to set its output to DVCAM and DVD simultaneously. At the same time, the other Digital Mastering Room can be using the Digital Beta and Beta-SP. Once a session is complete, just a few buttons can re-configure the room for

The newest Digital Mastering Suite is centered on the Y-Front URSA Diamond. The Y-Front uses a new technology to scan film. It diffracts light around the film frame so it softens up dirt and scratches while maintaining a sharp image. The Y-Front has its own Digital Deflection and can automatically calibrate its' own shading.

As can be seen, the world of film processing and film to digital mastering is an ever evolving process that requires greater and greater control and capacity to make film on digital look so good. The Y-Front Ursa Diamond produces the best picture available for Standard Definition.

### The Future

The greatest challenge for the lab at Pro8mm is to continue the diligent task of maintaining consistency and exceptional quality in the daily work. This requires constant monitoring and testing of the chemicals, running test strips, and focusing on every detail of the daily run. Pro8mm is committed to working with filmmakers to integrate small format film with other mediums, particularly the movement toward High Definition and Widescreen (16x9). New film stocks are in constant development, and several have been recently introduced to fill in the void left by the discontinuation of Kodachrome 40, such as Pro8/85, the hugely popular 100 ASA daylight reversal cut from Kodak's 5285, and Super-8/63, which is a black & white Hi-Con reversal. In



*Left: Pro8mm's main processor that handles ECN-2 (color negative film). Each chemical tank has its own independent automated temperature control. The filter tolerances and many of the rollers had to be modified for Super-8 specifications. Above: View of the Ursa Diamond Y-Front.*

addition, the company is committed to archiving and the preservation of family and personal film collections, and assisting clients with the ever expanding capacity to maximize the

quality and use of their film onto digital mediums. ■

*For more information on any of Pro8mm services contact:*

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