

# Film-Tech

The information contained in this Adobe Acrobat pdf file is provided at your own risk and good judgment.

These manuals are designed to facilitate the exchange of information related to cinema projection and film handling, with no warranties nor obligations from the authors, for qualified field service engineers.

If you are not a qualified technician, please make no adjustments to anything you may read about in these Adobe manual downloads

[www.film-tech.com](http://www.film-tech.com)

# Film NOTES

FOR REEL PEOPLE

A Technical Service For Filmhandlers From Eastman Kodak Company



March 1995



*Your customers want more than movies. They want the best presentation their money can buy. Kodak's **Film from Start to Finish** seminar fills the bill. Call (213) 464-6131 for details.*

**CLOSE-UP WITH IVAN REITMAN • EXTENDED-LENGTH REELS**



March 1995

H-50-36

## C O N T E N T S

- 3 PROJECTION  
Pytlak's Practical  
Projection Pointers
- 4 INTERVIEW  
Ivan Reitman
- 8 TECHNOLOGY  
ELR's: An Overview

*If you have any questions or  
comments please write to:*

**Editor,  
Film Notes for Reel People,  
6700 Santa Monica Blvd.  
Hollywood, CA 90038**

# Pytlak's Practical Projection Pointers

**Q:** I am a manager-operator in a small theatre that uses reel-to-reel projection. Last week, I returned to the booth to make a change-over, only to find that a bent take-up reel had jammed, allowing most of the feature to pile onto the floor. Amazingly, I was able to carefully wind the film back onto a reel without tangling or breaking. Consequently, however, it was filthy when projected. I attempted to clean the print by rewinding it through a clean flannel cloth. Even though the cloth picked up some dirt, the print now looks even dirtier than before, and my attempt to clean it probably caused scratches. What's the best way to clean a print in the theatre?

**A:** First, get rid of the bent reel. Second, never try to clean a print with a dry cloth. Although the cloth may seem to remove some dirt from the film, it simply redistributes most of the particles while generating a static charge on the film that attracts even more dirt. Any abrasive particles trapped on the cloth will scratch the film.

The best solution would be to admit your mistake and return the print to the distributor for professional cleaning,



**JOHN PYTLAK**  
Senior Technical Associate  
Motion Picture Systems Development Group

using either an ultrasonic solvent or an aqueous rewash process. This is the safest, most efficient, environmentally-sound approach. Another alternative would be to slowly wind it through a clean cloth dampened with film cleaning solvent in a well-ventilated area. This wet-cleaning technique minimizes static build-up and the risk of scratching.

Unfortunately, cleaning a print with cloth and solvent is difficult to do properly, especially when more than a few feet of film are involved. Because many solvents used for cleaning are toxic, care must be taken not to get them on the skin, or breathe their vapors. The film must be wound slowly enough to allow the solvent to completely evaporate. And care still needs to be taken not to scratch the film, especially when there are abrasive dirt particles. It is becoming increasingly difficult to purchase film-cleaning solvents because of environmental

*Continued on page 11*



# INTERVIEW

## Close-Up With Ivan Reitman

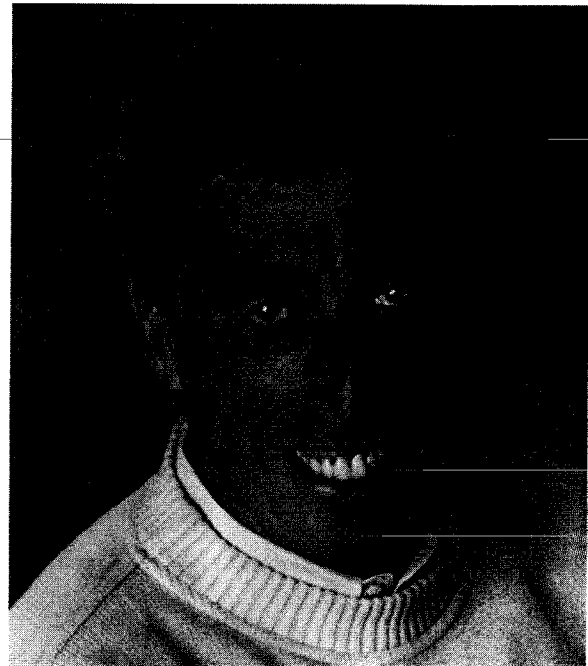
**O**ne of the toughest jobs in film is the achievement of good comedy. With action pictures, we can forgive a weak script or plot and enjoy the spectacle. But to achieve great comedy, the writer and director must really target the audience. If there is no laughter, there is no reaction and the picture fails miserably. Fortunately for us, Ivan Reitman has managed to eschew the pall of a silent theatre. Even in theatre lobbies, laughter reverberates. His list of credentials includes, *Meatballs*, *Ghostbusters I and II*, *Stripes*, *Kindergarten Cop*, *Twins*, *Dave*, and *Junior*. Mr. Reitman has repeatedly demonstrated his considerable talent as a film-maker—he continues to make us laugh.

**Q:** How difficult was it to get your first feature started?

**A:** I actually began making features right out of college. My first feature, *Cannibal Girls*, had a \$12,000 budget. Six relatives and friends contributed \$2,000 apiece and I was off and running. It's a comedy-horror movie where we improvised the script. I made a lot of mistakes, but parts of it are quite funny. It starred Eugene Levy and Andrea Martin, who went on to Second City Fame. I sold it to AIP at the Cannes Film Festival and, as a result, got into the film business.

**Q:** Was film-making always an avocation?

**A:** Yes—film-making or something similar. I started putting on puppet shows when I was three years old. When I got to college, they had a film



IVAN REITMAN

club, so I decided to try directing one summer. I made a short called *Orientation* that played a number of film festivals, and was very successful. In fact, the head of Fox in Canada saw it at a festival and liked it. I asked if they would be interested in blowing it up to 35mm and playing it as an accompanying short in front of a feature, which they did. They put in on with *John and Mary*, the Dustin Hoffman-Mia Farrow film, where it garnered a very good audience response. I did that before *Cannibal Girls*.

**Q:** It is often noted that directing comedies is extremely difficult, especially in the timing. What's your secret?

**A:** I don't think anyone can describe the secret. It's elusive and difficult to put into words. I have a music degree, and I find actually directing

films much like music. I keep using musical analogies when I describe it. It's about tempo and rhythms and pace, and certainly comedy is very sensitive to all of those things. Different things make us laugh, but you can't argue with what's funny and what's not, because the human



Ivan Reitman directs the comedy "JUNIOR," starring **ARNOLD SCHWARZENEGGER, DANNY DeVITO** and **EMMA THOMPSON**.

Copyright © 1994 Universal City Studios Inc.

reaction is so clear. People either do or do not laugh.

**Q:** After you've read a script and visualized it in your head, how difficult is it for you to translate your vision to film?

**A:** The hardest thing for me is laboring on the script to get it right. I think once I have it on script and in my head, it's pretty easy. Sometimes scenes don't come out the way I expect them, but often they work better by the time I'm finished. Getting it physically on the film is not the hard part.

**Q:** How much rehearsal do you have prior to filming ?

**A:** Normally I rehearse for two or three weeks.

**Q:** How much is improvised in your films?

**A:** A relatively small amount. I use improvisation as a directing tool to focus well-written scenes into creative freshness, so that you feel they are spontaneous and happening at that moment.

Sometimes little funny pieces of business or lines will come out of it, but it's a pretty small portion.

**Q:** On many films you are listed as a director and a producer. What added pressures occur when you're producing?

**A:** I think it's the opposite. It reduces the pressure; there's one less person to argue with. I'm basically responsible for the movie, so I'm more comfortable. In terms of the work involved, I have a couple of guys, Dan Goldberg and Joe Medjuck who I've worked with for almost twenty-five years. They handle a lot of the hour-by-hour producing problems, so I'm free to focus as a director. In terms of the larger aesthetic issues, producing gives me a more singular focus and vision on the film.

**Q:** Is it more difficult for you just to produce a picture and not direct?

**A:** I don't like just producing a picture, I really

**Considering the quality of home viewing and sound, I think it's very important for theatres to maintain excellent standards. Nothing compares to the beauty of a 35mm image projected.**

love directing. My worst day as a director is my best day as a producer.

**Q:** Do you ever get into a situation with an actor or actress where you don't get your desired response ?

**A:** It happens on occasion, usually with a smaller part that's difficult and yes, I've had to replace a couple of people. It's very rare, though, because the casting is done by me, and it's the director's

ultimate job.

**Q:** Do you ever feel that you've had to leave funny parts on the cutting room floor?

**A:** No, if it's good, I always work it in.

**Q:** I know you have to put a lot of trust into your cast and crew. Are there any specific cinematographers in terms of visualization that you would like to work with?

**A:** I've worked with Adam Greenberg and Michael Chapman a number of times and both of them are extraordinary. I would be happy to work with them anytime. There are also a number of cinematographers I haven't had the opportunity to work with, but I hope to someday.

**Q:** When you have a film that has a lot of effects, how much extra does it add to your job?

**A:** It's the one time that I storyboard. When I'm dealing with more complex visual effects and other components I can't play around as much with the blocking and staging, and the angles in comparison to a normal film.

**Q:** How do you spend a day when you're directing?

**A:** It's a constant series of questions and answers and decisions made. I think one of the things I've learned on a film set is that people want leadership, and to have decisions made.

Nothing makes the actors and crew more nervous than a perceived vacuum of leadership. Because when that happens, people rush in to try and fill the void, and that's when discord occurs. So, with me, it's making timely decisions and always staying open to new creative ideas and possibilities.

**Q:** Did you go to the movies a lot as a kid, and what are some of your first memories?

**A:** I went to the movies a lot. I escaped Czechoslovakia when I was five years old, so I don't think I went to a movie until I was five and a half. I think the first movie I saw was *Robin Hood*, the Errol Flynn version, and the next was *Lili*. I quickly became an avid filmgoer and went every Saturday afternoon to the local cinema where they had matinees, serials, and cartoons.

**Q:** Do you still go to the movies now, and do you watch your films to see audience reactions?

**A:** I don't have a screening room at home, so I go all the time unless I'm

shooting. I love to watch films and actually the only way I can stand to watch my films is in a movie theatre with an audience. I love the film-going experience. I get very excited as soon as I settle in.

**Q:** You see your films from production, to dailies, to post. Are you a critical film watcher when it comes to presentation in the theatre?



From left: **DANNY DeVITO**, **ARNOLD SCHWARZENEGGER**, and **EMMA THOMPSON** star in "*JUNIOR*," a comedy about a scientific experiment which leads to unexpected and wondrous consequences.

Copyright © 1994 Universal City Studios Inc.

**A:** I'm very critical, I'm still amazed when I go around the country to find how often the light and sound levels are not kept up. I don't mean just the volume, but the visual, and sound presentations are not really up to snuff. Considering the quality of home viewing and sound, I think it's very important for theatres to maintain excellent standards. Nothing compares to the beauty of a 35mm image projected on the screen, but you see a lot of bad prints, shown out of focus, with low light levels, and garbled sound. We see less of it in the major cities. I think many of the original multiplexes were built with inadequate side walls, so you get sound from neighboring theatres that distracts your film experience. There seems to be a trend to warrant more excellence in the theatre-going experience because of the competition of the home theatre, and I think that's good.

**Q:** We have seen many technical breakthroughs in the last few years. Where would you like to see technology go in terms of your films?

**A:** My focus is not very technological. It's really in learning how to tell a story as well and as originally as possible. My concern is always in finding that great story and presenting it in a new and original way. If that means using a new technology to make it work, so be it.

**Q:** Normally how many projects do you have in development at various stages?

**A:** My company, Northern Lights, usually works on fewer than ten projects at a time, which is a lot fewer than most of my brothers in the business.

**Q:** How long does it take to bring something like *Junior* to the screen?

**A:** It was in development for about a year, and in production another year, so with post, about two and a half years. This is fairly typical for us.

**Q:** Do you want to be known as a comedy director, or do you have other aspirations?

**A:** I think comedy is my voice. It's the way I see

the world even though I say serious things in my films. Movies like *Dave* and *Junior*, and even *Kindergarten Cop* are actually about serious subjects told in a humorous way. That approach seems to work for me.



Dr. Alex Hesse (**ARNOLD SCHWARZENEGGER**) astonishes his research partner, Dr. Larry Arbogast (**DANNY DeVITO**) with the development of his "project" in the comedy "**JUNIOR**."  
Copyright © 1994 Universal City Studios Inc.

**Q:** What advice would you give to students entering the business regarding how to fulfill their film-making dreams?

**A:** Learn how to tell a good story. I think too many film students know too much about the technology and not enough about story-telling and character development.

**Q:** Where would you like the theatre of the future to go?

**A:** If anyone could create a 3-D that doesn't require glasses, that would be a wonderful development.



# TECHNOLOGY

## Extended Length Reels: An Overview

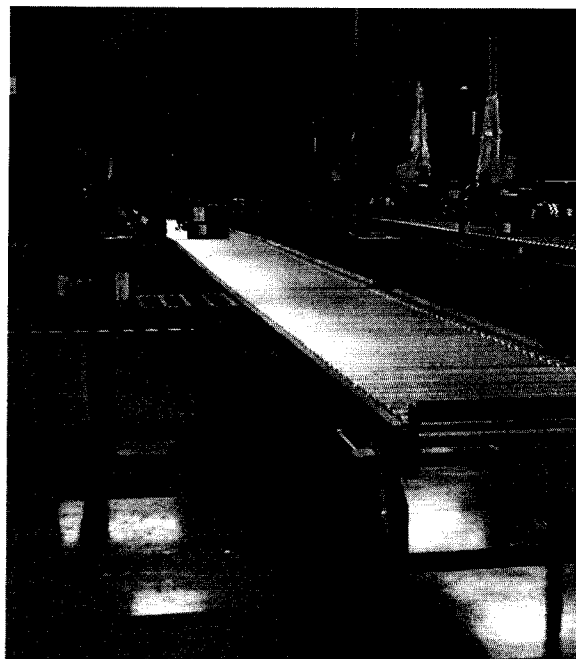
**A**t a meeting of the Inter-Society in 1990, it was proposed that a feasibility study be conducted with regard to industry adoption of Extended Length Reels (ELR's). This commenced under the auspices of the Technology Council, with consultant Barclay Hudson embarking upon gathering a ponderous amount of research and assembling what has become the definitive report on the subject. The scope of this report embodies the concerns and interests of virtually all major groups within the motion picture industry, including the MPAA, NATO, Inter-Society, Tech Council, and TEA.

In 1992, Technicolor Entertainment Services was founded with the expressed objectives in mind to move into the end of the century employing state-of-the-art print handling and shipping services. Addressing concerns similar to those of the proponents of ELR's, Technicolor advocates greater print management efficiency among distributors, improving film cans, providing a "clean room environment" for film handling, reducing piracy, and shipping to the theatres in a more reliable and accountable manner, among other things.

While Technicolor's concepts are being shown to be both viable and timely, the benefits of an industry-wide conversion to ELR's, should be identified.

### THE DESIRABILITY OF ELR'S INCLUDES:

1. Minimizing print handling. Both Deluxe and Technicolor Labs have indicated their ability to print on 6,000-foot reels. This format is a closer approximation than the current 2,000-foot reels to the format in which a film is played at the theatre. Further, only *ONE SPLICE* would be required in the projection booth. With the advent of booth operators whose training in projection may be minimal, this is critical in providing a



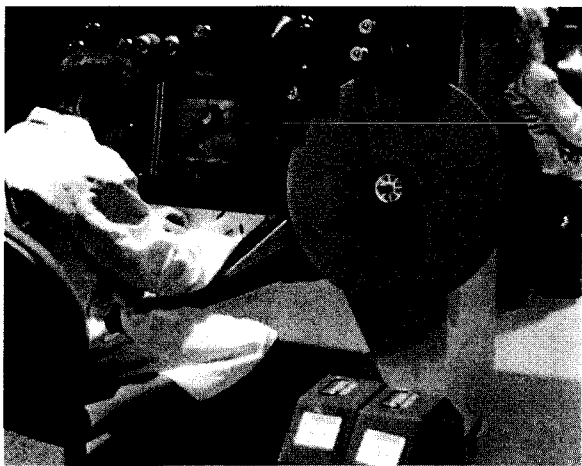
**SORTING CONVEYOR-TECHNICOLOR ENTERTAINMENT SERVICES**  
quality presentation. The less handling of the film stock in all areas of mounting, shipping, and exhibition, the better.

2. Economic savings. With the cost of producing a negative skyrocketing, it is vital that the



distributor save costs where possible. Since current splicing operations, according to the Barclay Hudson report, take more than an hour per playdate, this computes to more than 400,000 hours annually spent on splicing. The labor is equivalent to about 200 full-time people, or a bankable payroll of about \$3.5 million per year. Reduced print damage may save another \$2.7 million.

3. Improves presentation and reduces film damage. Since splicing is a major source of dirt and scratches on the film as well as outright damage that can cause performance interruption,



HIGH-SPEED PRINT INSPECTION ROOM—TECHNICOLOR ENTERTAINMENT SERVICES

minimization in this area is highly desirable.

4. Shipping in 2,000-foot reels is antiquated. The shipping configuration has not changed since the 1940's and, in an age of platters and automation, has fallen woefully behind available technology. Additionally, the bands and reel indicators are outdated, labor-intensive, unnecessary, and a general nuisance to maintain.

5. Film needs to be handled in as near to a "clean room" environment as possible by people qualified to do so. All of the painstaking efforts made at both the manufacturing level and the laboratories typically fall by the wayside when film is mounted from core to reel by individuals who are actively engaged in smoking while performing the task. This problem is compounded when the print reaches the theatre and is often abused by a harried operator, anxious to get it on the screen, deal with the numerous splices, determine whether each reel is "heads or tails out," and dispose of bands and leader extraneous to

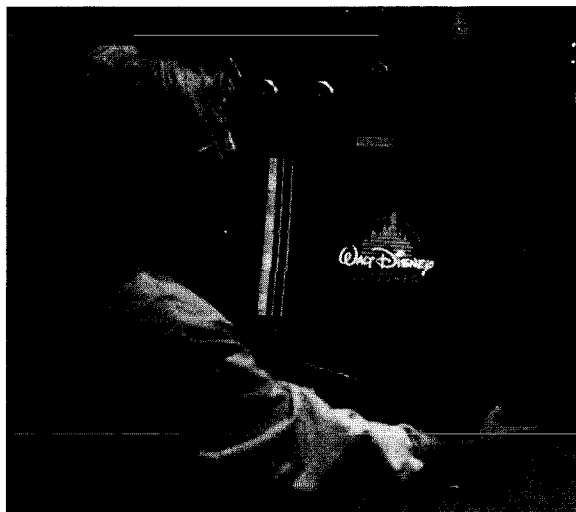
the loading. By printing in 6,000-foot lengths, mounting in that mode, and shipping, the opportunity for film damage is substantially curtailed.

6. Aged and damaged metal shipping cases need to be replaced and updated. The day of the pre-WWII metal can has come and gone. These misshapen monstrosities cause edge damage as well as providing a chance for the cardboard liner to flake onto the surface of the print. The adoption of ELR's would necessitate moving into today's technology in the cases as well.

7. Reduction in film piracy. Through bar code tracking, film delivery that must be signed for at the theatre, and more secure mounting, handling, and shipping environments, the windows of opportunity for piracy are definitely lessened.

-----  
No technology barriers exist that would preclude ELR's. With the evolution of projection since the 1960's, ELR's are long overdue. A full 98% of exhibitor/projectionists prefer the longer reel (Source: Eastman Kodak *Film from Start to Finish* program personal interviews).

A question arose at the 1990 Inter-Society meeting when the ELR concept was initially broached: "If this is such a great idea, why hasn't anything been done so far?" The answer from the meeting report was: "The issue has not moved forward because key elements of the industry have not worked together to make it happen." In the interest of our industry, let's resolve to remedy that situation at once.



PRINT INSPECTION STATION—TECHNICOLOR ENTERTAINMENT SERVICES

## THE EFFICACY OF EXTENDED-LENGTH REELS

*At a recent symposium sponsored by TEA (Theatre Equipment Association), Universal's Senior Vice President and General Manager Dan Slusser proposed industry-wide adoption of 6,000-foot extended-length shipping reels for film. The following encapsulates his thoughts on the subject.*

**Dan Slusser:** As a representative of Universal, I was one of the first to fund the Technology Council which was chaired by Universal's Dick Stumpf. Upon reading the Barclay Hudson report, which was quite remarkable in its scope, I asked Dick and others why ELR's (extended-length reels) had not been adopted. I got mostly pat answers like "the cost savings are in all the wrong places." This often is a typical response when things in our industry don't move forward. A short time ago, I was afforded the opportunity to see a presentation from Technicolor Entertainment Services on their distribution and shipping services. One of the most impressive aspects of their service was the forethought that had gone into the operation, particularly how they handle film and the issues that paved the way for the future ELR's—packaging, shipping, and so forth.

**Q:** Reaching a consensus within the diverse group of labs, distributors, and exhibitors to move forward with ELR's has proven to be a stumbling block over the last few years. Do you believe these various entities are more receptive to this change now?

**A:** I have spoken with both Ron Jarvis at Technicolor and Cyril Drabinsky at Rank Deluxe and they both have assured me that they are willing to retrofit their labs to make printing on 6,000-foot reels possible. After all, Kodak ships it to them on 6,000's. It makes no sense that the film is then cut into pieces ostensibly for the theatres when the theatres no longer use it in that configuration. Then, upon re-reading the Barclay Hudson report, I came to the quick conclusion that ELR's are one of those things that are totally right except that nothing has happened. I am in the process of assembling a meeting of exhibitors and distributors who are capable of exchanging ideas on this important issue and making a decision to embrace this technology.

**Q:** You are obviously strongly motivated to inject some much-needed energy into this project. What are some of the benefits of ELR's?

**A:** There's obviously the immediate labor savings in print life, which is helped by both the ELR and Estar stock. Maximizing print life provides obvious savings to our industry at a time when \$60 to \$70 million is spent for a single negative. We're also spending a tremendous amount of money on release prints and shipping. It's absolutely critical that we save money where it is practical to do so. These are places where we can save money. They don't interfere with the creative process, they're highly desirable for the theatres. In the final analysis, everyone benefits. That's what motivated me.

**Q:** Considering the "mechanics" of ELR's, do you see the industry adopting one or two shipping cases to hold the 6,000-foot reels?

**A:** Definitely two. There have been designs—Technicolor is working on one now—that are fiberglass and they hold a single 6,000-foot reel. They fit into the containers that are being used by Technicolor and Airborne right now. The containers were designed for that purpose and they seem to meet all the requirements. They are cost-efficient, in spite of what you might hear. There are some labor efficiencies for the labs which theoretically should reduce the cost of handling and that may be passed along to the distributors.

**Q:** Do you think the 6,000-foot ELR's are perhaps an interim step and that ultimately we will move toward a single 12,000-foot "donut"?

**A:** My feeling is that, in an ideal world, if you get an entire feature on a single platter, you'd have the ultimate. There are multitudes of other questions that have to be addressed, particularly in a theatre, because it is an area where you may be dealing with a single individual and the weight issues get complicated. There could be difficulties getting such a large reel into the projection area, up and down stairs, and so forth.

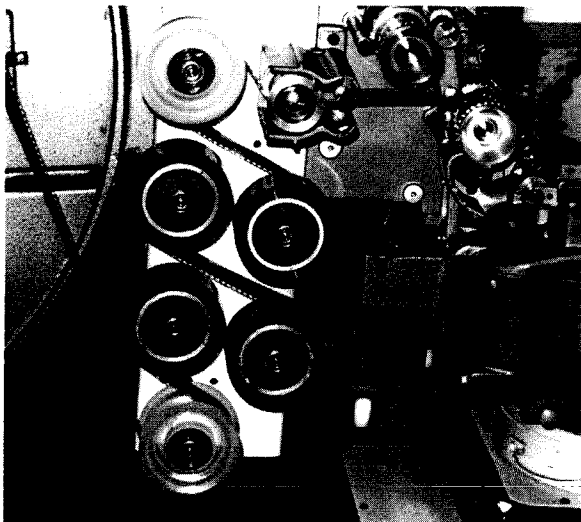
**Q:** Finally, in talking with exhibitors on this subject for some years, they have expressed concern that if they receive a 6,000-foot reel, they are still going to find it necessary to go through a hand-inspection process if there are internal splices. This type of inspection could eradicate the intended time and labor savings. To clarify once more, then, we are talking about printing in 6,000-foot lengths as well as mounting and shipping?

**A:** Yes. As I indicated, both Technicolor and Rank Deluxe have stated a willingness to print in this 6,000-foot format. The goal is to get all labs to do so and I am confident that all labs will ultimately print on 6,000's.

*Continued from page 3*

concerns. Methylchloroform (1,1,1-trichloroethane), the primary ingredient in most film cleaners, contributes to the depletion of the upper atmospheric ozone layer. Most commercially available film cleaners are being reformulated or removed from the market to comply with international agreements to protect the environment.

Another method of cleaning a print is the "web cleaner," such as those made by 3M and Kelmar. These cleaners use a special woven web that traps dirt particles as the film moves past the web. The web moves at a slow rate of speed, so entrapped dirt particles hopefully do not build up to the point of scratching the print. These film cleaners are usually effective in removing routine levels of dirt, but sometimes tend to overload with abrasive particles from very dirty prints resulting in scratches.



**PARTICLE TRANSFER ROLLERS (PTR's) MOUNTED NEAR PROJECTOR**

Kodak has introduced a film cleaning technology that effectively removes loose dirt particles from the film with very low risk of scratching. A soft polyurethane roller, called a PTR roller, has a specially-finished durable "tacky" surface which removes loose dirt particles from the film by adhesion (similar in concept to the sticky rollers sold to remove lint from clothing). Because the roller turns freely with the film (the film does not rub against a stationary surface) and the PTR material is so soft, the risk of abrasive particles scratching the film is very low.

When the PTR becomes loaded with dirt, it can be rejuvenated by simply washing it with water and drying it in the air. Experience has shown that a single set of PTR's can be used to clean over 10 million feet of print film—equivalent to over six months of continual use, ten hours a day.

Particle Transfer Rollers and mounting hardware are available from FPC Inc., (A Kodak Company), 6677 Santa Monica Boulevard, Hollywood, CA 90038, Phone (213) 465-0609. Many theatre equipment suppliers stock the Kodak/FPC Particle Transfer Rollers.

Additionally, several major manufacturers of projection equipment supply film cleaners based on the Kodak technology. They include:

**Kelmar Systems**

284 Broadway  
Huntington Station, NY 11746  
Phone (516) 692-6131

**SPECO Systems & Products  
Engineering Company**

709 North Sixth Street  
Kansas City, KS 66101  
Phone (800) 633-5913

**Strong International**

4350 McKinley Street  
Omaha, NE 68112  
Phone (402) 453-4444

**Filmlab Engineering Pty. Limited**

201-203 Port Hacking Road  
Miranda, New South Wales, 2228, Australia  
Phone 61-2-522-4144

Many theatre equipment supply dealers stock PTR film cleaners from these manufacturers.

So the next time you end up with film spaghetti on the floor, I would suggest using a PTR film cleaner to remove the dirt. Even if the PTR surface fills up with dirt, there is little risk of scratching as long as the rollers turn freely. Just be sure to wash the PTR's after each show to remove the accumulated dirt. After several shows, you will find that most of the dirt has been removed from the print. It may actually be cleaner than when you received it!

**Motion Picture  
&  
Television Imaging  
Eastman Kodak Company**

343 State Street, Rochester, NY 14650-0315

**Offices**

---

ATLANTA	5315 Peachtree Industrial Blvd. Chamblee, GA 30341	(404) 455-0123
CHICAGO	1901 West 22nd Street Oak Brook, IL 60522-9977	(708) 218-5175
DALLAS	2800 Forest Lane Dallas, TX 75234-7596	(214) 919-3444
HOLLYWOOD	6700 Santa Monica Blvd. Hollywood, CA 90038-1203	(213) 464-6131
NEW YORK	1133 Avenue of the Americas New York, NY 10036-6774	(212) 631-3450
TORONTO	3500 Eglinton Avenue Toronto, ON M6M 1V3	(416) 766-8233
VANCOUVER	840 Howe Street, Suite 30 Vancouver, BC V6Z 2L2	(604) 684-8535

---

Outside the United States of America or Canada  
please contact the Kodak company in your country.

Eastman Kodak Company  
Rochester, NY 14650, U.S.A.

*EASTMAN KODAK, ESTAR  
and REEL PEOPLE are trademarks.*

KODAK Publication No. H-50-36

Printed in the U.S.A.  
March / 95

EASTMAN KODAK COMPANY  
343 State Street  
Rochester, New York 14650-0315

ADDRESS CORRECTION REQUESTED

MAR. 29 1995

BULK RATE U.S. POSTAGE <b>PAID</b> PERMIT 368 SANTA ANA, CA
---

K LAYTON  
1941-1/2 E STATE #8  
OLYMPIA WA 98506