Basic steps in making a 16mm sound film are listed and explained. Preshooting considerations are discussed, and fundamental procedures are described. "Rushes," rough cut, final-cut work print, the recording session, sound track, and answer print are defined. Film production agreements, including payment arrangements, are also covered. (SK)
A FILMMAKER'S PRIMER

... If I'd Known Then What I Know Now
BEFORE YOU BEGIN......

In this pamphlet, we're talking specifically about producing a 16mm film program with a sound track. Now, before you start learning how to be a film client, there are three questions you'd better have answered for yourself:

1. WILL YOUR PURPOSES BE BEST SERVED BY A 16mm FILM? A 16mm film program is versatile -- it can tell your story in a detailed way, and you'll be able to find machinery to play it on almost everywhere. You can also broadcast it on television. However, it is expensive in terms of time and money -- so before you decide on 16mm, consider whether your message could reach your intended audience just as effectively through a different medium -- like super 8mm film, or videotape, or a slide/sound production -- any of these are likely to be less costly.

2. DO YOU HAVE TIME TO PRODUCE A 16mm PROGRAM? How long a program takes to produce depends on many different aspects, from shooting and re-shooting, to scripting and editing and revising, to processing and printing. In general, if you want a 5-20 minute program, from the time you finalize a working agreement with your producer, until he delivers to you a release print, will be 3 to 9 months. If you need something for a more immediate use, you'd better reconsider slides or videotape.

3. DO YOU HAVE MONEY FOR A 16mm PRODUCTION? It's expensive. You're going to be paying for professional services at every step. In general, you should think in terms of $1,000-$1,500 per minute of finished program.

Believe me, you'll be glad you thought it out ahead of time.
PROCEDURE AND TERMS

Once the producer has shot his film footage, his first step is to send it to the lab and get it developed, or "processed". In his work order to the lab, he will have given them instructions about which reels he wants "printed". The "prints" he gets back will not be the original film he shot in his camera at all, but a film printed from his original by the lab. This is his work print, and from it he will put together a pattern of the way he wants the program to look. He'll probably ask the lab to keep his original in their vault, where it will be stored dust-free, and at the proper temperature and humidity, until he's ready to cut it to his specifications.

So, as a client, if you're asked to come in and view the "rushes", what you'll be seeing is the uncut work print of everything that was shot. At this point, there won't have been any color corrections, or "timings" --- that is, exposure corrections --- so if the picture flutters between dark and light, or the people look a little green, don't worry about it YET. One thing you should think about at this stage is what uses you may have for the footage in the future, outside of the immediate program. If you have any thoughts of doing another major production, you'll want to duplicate the original before any cutting takes place, because once the original has been cut, it's pretty useless for anything else. The duplicating method that produces the highest quality result is called "optical mastering". The optical master is a very high quality print, and as such, it's expensive --- about 70-90 cents per foot. If you want the footage but don't need quite as much picture quality --- for instance, if you just want to transfer to video --- the answer might be to get a second work print from the original, which is less expensive than the higher quality optical print.

Generally, a producer has a detailed "shooting script" before he goes on location --- that is, a list of what scenes are going to be shot, and in what order he intends to assemble them. Once he's received his work print from the lab, it's time to finalize that script, and this will often be combined with at least a rough draft of the narrative, and notes on any other sound effects or music he plans to use.
When this script is done, he'll start cutting, or "editing" the work print, at first stringing scenes together, and later refining the shots, combining various camera angles of a single scene, and making qualitative judgements about length of shots and scenes, and transitions between scenes, using direct cuts, dissolves, and fades (going into or out of black). At this stage, he'll also be making decisions about what titles to use, where they should come, what color they should be, whether they should be on a solid-color background, or "supered" over a motion or still sequence. A producer may do these himself, or send the job out to an optical house. If you're not sure the job will be done RIGHT in-house, by all means, send it out. An unattractive title is a terrible way to start a film. If I were a client, I'd want to be in on all the decisions about how the titles are to be shot.

Once the work print is pretty complete, final revisions can be made on the narration, and a voice can be chosen. The narrator may want to see the work print, so as to get a feel for the program. When the narration has been recorded, it will be transferred from regular audio tape to 16mm magnetic stock --- which will then be cut to fit the picture exactly. If the producer plans to use other sound effects or music, he should get it transferred to 16mm stock at the same time. Back in the editing room he'll be putting everything together --- picture, narration, sound effects and music, with the help of a synchronizer which will show, frame for frame, all aspects of the program just as they will be, with the exception of the titles, which generally aren't work printed. They'll simply be crayoned onto the work print. Usually, there will be a sound track for the narrator, one for all the music, and one or more for sound effects. None of these are really hard and fast rules, but the sound mixer will be very grateful if the narrator is on a track by himself --- that way, once the mixer has set the proper volume level for the narrator's voice, he won't have to make any changes on that track for the rest of the program. And, after the sound tracks, are assembled, the mixing studio is the next stop. Here they'll mix all of the tracks onto one length of magnetic stock, which will then go to an optical printer who will convert the track from a magnetic sound signal to one using light impulses, called an "optical track".
Meanwhile, back at the editing room...the work print, which is now exactly the way you want it, goes to the conformer --- a very careful person who wears white gloves --- together with that original which the producer has retrieved from the lab's vault. The conformer then matches the original to the work print the producer has given him, and makes a cue sheet for the lab. Basically, the producer has about three choices as to how the film is assembled for the lab:

A ROLL, in which scenes are simply spliced together. This has two drawbacks. First, an experienced eye will see the splices when it's projected. Second, you can't dissolve between scenes. You can fade out, but you must fade into the next scene, at the same rate that you faded out the last. This method is the least expensive, for obvious reasons.

A & B ROLLS: This method is the most common. You assemble scene 1 of your program on Roll A, and on Roll B you (the conformer, that is) put black leader. At the end of scene 1, black leader is attached to Roll A, and the first frame of scene 2 appears on Roll B. This is why the lab needs a cue sheet --- so they know when to stop printing Roll A and start printing Roll B. This method allows you to dissolve from one scene to the next without a visible splice. And, by printing both A and B rolls at once, you can super your titles over the original of a motion background. In A Rolling, title supering would have to be done at the optical house, and that second "generation" --- that is to say, one print removed from your original footage --- now becomes your original for the purpose of making final prints. If you go that second generation, you must expect to lose some picture quality. So generally, A & B Rolling is a more versatile method of assembling your program for the lab, and as such, it's a bit more expensive. Your conformer will probably charge you per 400-foot reel for his services, with a stated minimum charge, and certain limits as to the complexity. (That means if you make a splice every six frames, it's naturally going to cost you more for a 400-foot reel than if you cut every 3 to 6 seconds or so, like a normal program.) (16mm film is projected at 24 frames per second.) Occasionally, using the A & B method, you'll need to go to a C Roll, for a special effect, like a dissolve from one motion sequence to another, with a title supered over the dissolve sequence. With a little planning, you should be able to avoid
this, which would be a good idea, since a C Roll will cost you more, both in assembling and in printing, and chances are you really don't need the third reel.

The third method of assembling the program is "Zero-cut" assembly. This done for feature films, with big budgets. It's a method whereby you have no actual "cuts" from one scene to the next --- every scene change is a dissolve, or cross-fade, although some of these dissolves happen so fast that you never see any melting of one scene into the next. It just looks like a cut with extra smoothness. This method is certainly best from an aesthetic viewpoint, but is considerably more expensive than the other methods, and therefore is seldom used for commercial or educational productions.

The catch is that the producer has to decide before he does the work print, how he wants to assemble for printing. It makes a difference in how he cuts the work print.

Once the original has been matched to the work print, the original and the optical sound track are taken to the lab. They will print it as per the conformer's cue sheet, making some color and timing corrections as they go, and in about a week, send back an answer print. At this point, you and the producer will want to project it on a screen, and watch very carefully for picture quality --- does it look very sharp, or are things a bit fuzzy around the edges? Within scenes, and from one scene to the next, does the whole picture look too dark, or too light? Are the dissolves even, or does one scene start to fade out, but flash to black before it's out completely? And how about the soundtrack --- is the balance of voice to music to effects pleasing? Is there a great deal of snap, crackle, and pop --- or is the track pretty free of "static" noise? You'll have to watch and listen carefully, because this is the last chance to make corrections. The producer's next step is an appointment with someone at the lab, called a timer, who will screen the answer print and listen to your comments, and make corrections accordingly. If there is a sound problem, and the sound studio is separate from the lab, your producer will have to go back to the sound studio to get corrections made, in all likelihood. The next step is a second answer print. Usually this will be the way you want it, but don't hesitate to ask for a third print if there are still problems.
At this point, you're ready to make the final copies, called "release prints". If you plan to make lots of release prints --- say, fifty --- you'll want the lab to make an "internegative" --- a negative from the original, from which release prints will be made. This will protect the original from getting worn out before you have all the copies you want. If, on the other hand, you only want five or ten release prints, an internegative probably isn't necessary.

One final, general rule --- as a client, you want to be informed and consulted at each important step --- but the less you have to actually do, the happier you and your producer will both be --- so at every step, make sure you're dealing with people you trust, who have good reputations both for product and for working with their clients.

AND NOW FOR THE NITTY-GRITTY.....

As the client, you probably know more about the subject of the program than anyone else, so your input is important to getting the final result you want. Therefore, you should see to it that you're consulted before the fact on the critical issues. For instance....

THE "RUSHES"

The client doesn't always see the rushes, but he always has that option, and it's probably a good idea not to waive it when you're working with a film producer you haven't worked with before. That way, you'll know exactly what he has, to work with. This would be a good time to find out what the time schedule is for the production --- when will a rough cut be ready (that is, the first stringing together of scenes, in the order they'll appear in the program)? When will the final cut work print be finished? Who's going to do the conforming, or matching? You should also see a script at this time, which shows the order in which the scenes will be assembled, and also has at least a rough draft of the narration, and some indication of other sound effects or music the producer intends to use. You'll have to decide whether you think this program, as outlined, is going to be right for the audience you want to reach. The producer shouldn't start cutting any footage until you have seen and approved a rough script.
THE ROUGH CUT

Again, tell them you want to see it. It will give you a bit of extra assurance that the program is going to look the way you thought it was going to look. This would be a good time to discuss titles with them, too. You'll have to provide names of people or groups who should be credited on the film. They should also have suggestions for you at this time about how the title sequence should look --- what color and type style for the letters, and should they be on a plain background, over a still or motion background. The producer should have the client's approval on these points before any titles are shot. Also, ask politely about the final narration script, their plans for a voice, and any new developments on sound effects/music. This way, they'll probably have a final script ready when you come back to see the finished work print.

THE FINAL CUT WORK PRINT

We're talking about the scenes put together in pretty much their final form. Different angles of the same scene will be intercut the way they will appear in the finished program. Fade-outs and fade-ins, dissolves between scenes, and titles will be crayoned in at the appropriate places, in "real time" --- that is, with an indication of where and how they will come on and go off. Up until now, chances are you will have been looking at the film on a small viewer on the editing table. When it comes to the finished work print, make sure you see it projected on a regular size screen. If there are any imperfections such as out-of-focus sections, or disturbing camera movement, they'll show up much better on a full-size screen. Then, before you go any farther, ask to see a final draft of the narration script. Check it carefully accuracy, working, and general style --- are you telling your potential audience what you want to tell them, in the way you want to tell them, and does that style go well with the cameraman's and the editor's style?

Ask to hear a demonstration tape of the voice of the person the producer wants to use for the narrator. If there are any disagreements on the script or the voice, it would be better to resolve them before you get to the recording studio, and avoid involving the talent and the sound technician in the discussion. Express your interest in attending the recording session.
THE RECORDING SESSION

You are there to preserve all the accuracy and careful wording that's been written into the script. The reason you need to be present at this point is that often, a narrator will have a hard time reading a word or phrase as it's written, and the director (probably your film producer) will have to do some re-wording on the spot. Your job is to make sure the intended meaning stays intact. Also, there may be sections which the narrator has trouble interpreting because he is missing some information. You know the subject, and can give him a context for what he's saying, which the script may not provide.

THE SOUND TRACK

When all the sound has been laid down to synchronize with the picture, you may want to go in and hear it on a synchronous playback machine --- probably a "movieola". Find out all you want to at this session, be as helpful to the producer as you can --- but don't plan to go to the sound mixing session with him. You'll live longer. And there's really nothing you can do at that point.

Now all you have to do is sit back and wait for....

THE ANSWER PRINT

Look at it carefully, using all the criteria outlined under "procedure". If the titles aren't intense enough, say so. Make whatever comments you have to your producer, and let him relay them to the timer at the lab. You'll go through the same process for every additional answer print you have done. Naturally, at this point, you're relying heavily on the producer's expertise. When everything is the way you want it, you'll order the number of prints you want, and you're home free... except for the bills.
Contracts for commissioning a film production are very important. Too many inexperienced film makers in their desire to get an opportunity to make a film will promise more than they can possibly deliver, and the inexperienced client who fails to protect himself may end up with a poorer film than he wanted -- or worse still, an uncompleted film.

The following considerations must be agreed on by the filmmaker and client.

1. The responsibilities of the client and those delegated to the film maker. Who has final approval of how the film is edited, how the money is controlled, who approves the creative talent, who enforces production schedules --- all these should be covered by the agreement.

2. The rights to all material included in the film such as the script, film, original art work, music, etc. Also included should be who has rights to use footage in other than the contracted production and under what terms.

3. Other matters for the agreement include ownership of the original film negative elements, credits on the film and promotion, rights of contract termination, contingencies, and methods of payment.

In general, it is to the advantage of the client, for the filmmaker to stipulate the following.

--- The script, workprints, and answer prints will be subject to the approval of the client.

--- On completion of the film all picture and sound negatives, an answer print, and all original art work will become the property of the client.

--- The producer will obtain rights to copyrighted material used in the production, without additional cost to the client.

--- The producer will secure written consents from any person whose picture or voice is used in the film.
--- The producer agrees to make all contracts and arrangements for the productions independently and will assume all liability for such arrangements.

A suggested payment schedule for the film production is:

1/3 on signing the agreement
1/3 on completion of the major photography
1/3 on delivery of the approved answer print

The client should retain the right of cancellation with due notice at any stage of the production, with the client liable for all costs incurred up to the date of cancellation, plus a percentage of the direct costs, as agreed by both parties. In addition, the client may wish to require periodic financial reports from the film maker, especially if the client has agreed to cost overruns.