



Making Optical Tracks

The following information is provided to you so that we can produce optical soundtracks that will match as closely as possible the sound mix you've done. This involves two things: sync and sound quality.

SYNC

In the digital world, sync has become an increasingly difficult problem. When film is used throughout the post-production process, there is little problem with sync when making optical tracks. When digital audio workstations and film-to-video transfers are involved, great care must be taken by all parties to insure proper sync. While the potential problems are too numerous to be listed here, the main "family" of problems involves the slowing down of elements when transferring film to work in the video world and then speeding the sound mix back up to film-speed at the end of the process. Of course most of our work is done in this digital world; all we can say is be wise and be careful.

SOUND

We are all used to digital audio quality: a non-existent noise floor, wonderful dynamic range, crisp highs and booming lows. Unfortunately, these qualities do not exist in analog optical tracks. With each step up (from 16mm, to 35mm mono, to 35mm SR/A stereo) the quality of the track goes up, but it never reaches the level we are used to hearing even on a VHS tape. While mixing, you must keep in mind that quiet sounds in your mix may nearly disappear because of the noise floor of the optical track. Also, the high frequency sounds will not be as bright on the optical track; or conversely, may distort in the optical track if they are too bright on your printmaster.

Where we hear sound also greatly affects *what* we hear. The sound system in even a small project audio studio will most likely sound better than the sound system used to play back at least 16mm prints. While mixing, we highly recommend that you monitor with an appropriate equalization curve for the type of optical track to be made (see below). We also recommend that you keep in mind the acoustics of the rooms in which your film will be seen, compared to the room in which you are mixing.

In most cases the quality of the sound track for a video copy of the project is as important as the film's sound track. We recognize that you should not compromise the quality of this video track for the film's track. With careful planning you can have the best of both worlds.

MIX FORMATS

Your printmaster must be any of the following formats:

- 16mm magnetic film 1 or 2 tracks w/no noise reduction or with Dolby A
- 35mm magnetic film 1,2,3 or 4 tracks w/no noise reduction or with Dolby A
- DAT with timecode 1 or 2 tracks

- 1/4" with timecode 1 or 2 tracks
- DA88 / DA98 with timecode 1 to 8 tracks

Other timecoded formats are acceptable, but these formats will be transferred to a timecode DAT. There is a \$2.00 per minute charge to transfer to DAT; the DAT stock will be billed at \$13.

REEL LENGTHS

The maximum length for 16mm optical tracks is 1200' (33 minutes); for 35mm the maximum length for each reel is 1000' (10 1/2 minutes). For reels longer than these lengths, a splice will need to be made in the optical track. Please see the price list below for the added charge for splicing reels together. When the finished film print is delivered in multiple reels, pull-ups need to be included in the final optical track. (A pull-up is the first few frames of a reel - 26 frames for 16mm, 20 frames for 35mm - which must be edited onto the tail of the previous reel.) See the price list for costs if the printmaster does not include pull-ups.

Contact The Cinema Lab for more information about the optical tracks, 303-783-1020.