

Sound Frequently Asked Questions – or the ones that should be.

Fast, Cheap and Good... Pick two.

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When should I start thinking about post sound

BEFORE you shoot a frame of film. Talk to a post sound person. Hire them if poss but at least have them go over what you should do and not do while shooting. And decide on formats, sample rates etc. with them. A lot of production folks don't work in post so their choices may not be what's best for post. This is very important if your project is from film to video or visa versa.

How long does Post Sound take to get that "Hollywood" sound

As a rule of thumb figure editorial (not counting the mix or music creation) will take 10 – 15 man-hours (could be woman-hours, I just can't bring myself to type "people-hours") per screen minute. So if you have a one man post crew your 100 minute film is going to take 1,000 – 1,500 hours to edit. That's in the ballpark of six months. So the two weeks you have allowed till the Sundance deadline isn't really going to work.

If your doing a documentary, what is acceptable is a lot different and the time requirements are probably going to be a lot less.

How long will it take to Loop (ADR) my film

Figure an experienced actor can do 8– 15 lines an hour. A line is less than 10 words. An inexperienced actor will probably go slower, an inexperienced director can slow the process down also. SO talk it over with your editor recordist etc ahead of time and have a plan. ADR is hard to do outside of a studio and studios cost money.

And don't EVER listen to that voice that says "we can just ADR it in post" again. Unless you have a good sized paid crew it is NOT cheaper to ADR it in post.

How much is this all going to cost me

There is no sure answer for that. Looks at how long it's going to take and you'll have an idea. But most shows are done by bid. You ask a post production facility what they will charge and they will look at the length, amount of ADR, how FX heavy it is etc and give you a bid. You can also go to them with your budget and see what they can do. Deals are struck all the time. A lot depends on what your needs are what your timeline is and what kind of mix you need.

BIG budget films spend ~2–5% of the budget on post sound. So a 30M film should budget \$750,000 to \$1,500,000. The smaller the overall budget the higher the sound post should be (percentage-wise). A no-budget film needs to think creatively. You don't have enough money to "pay" someone to do your sound so what can you offer. A hint, "copy and a credit" is probably not going to do it. Maybe your hook is that your film looks great and has some reel potential for your up and coming sound editor. But to make that one work your film needs to REALLY look good AND there has to be a chance to do some interesting sound. Maybe your hook is a GREAT script or points (deferred isn't very attractive since it's mostly vaporware). Maybe it's a friendship. But even with creativity the rent still comes due so you should have some money to help your sound editor live through your post and realize that they will have to do some paying work to support working on your film. That will add more time to your post schedule. SEE HOW LONG

DOES POST SOUND TAKE.

Why do I have to get permission to use Madonna's songs in my film?

So she won't end up owning your film, house etc. Or in Canada so you won't do time, they are a bit stricter about such things. You don't need her anyway. Go get a composer. And if that's not in the cards then there is a LOT of music that is licensed under [Creative Commons](#). There is also a HUGE amount of Royalty Free music available (you pay a fee up front but no on going royalties). Local bands are also a good bet and local musicians playing Classical music (pre 1900 classical music) are also a good option. You might also be able to strike a deal with the BIG name, but without a personal connection it's a very long shot.

Surround or not to surround

Actually a good question. My general answer is that if your not mixing on a proper stage and your not doing a game you should stay away from surround. There just isn't much reason to do a surround mix and it takes a LOT more time and money. The pressure is high to do your film in surround because EVERYBODY is and the manufacturers (or rather their marketing departments) are pushing it like mad. But really stop and think, why? What does it get you? Most films spend very little effort on surround because most films get little benefit from it. MANY theatres won't play it in surround anyway (even if it's billed as a Dolby Digital theatre. It's not easy to mix for the big screen with out mixing in a big screen room. It's VERY difficult to mix surround to a small screen and have it sound good on a big screen. Little rooms just don't sound anything like big rooms. An experienced editor/ mixer can usually translate and get a stereo mix that works pretty well but surround is a very different beast. And if your not playing your film back off a DVD how are you going to get that surround mix out to the audience? There are a few options but pretty much all of them are going to cost you. There are a few ways to cheat your way in but why?

OK your only going to sell DVD's so surround is no problem right? Wrong. A lot of your viewers are not going to play back on a

surround system and VERY few are going to play on a system that is properly set up. So like the theatre you have to assume stereo is all that folks are going to hear.

So your stereo mix is still king and you can't put anything in the other speakers that you can't afford to lose.

But BIG films are in surround. Yes they are. Well not all of them.

Woody Allen for one doesn't even like stereo. Unless he's been convinced in the last year or two all of his films are in mono. But back to you. BIG films spend a lot on sound and mix on proper mix stages. They also do separate stereo mixes for when the surround doesn't play (for whatever reason). Those DVD's are also mastered separately with a VIDEO mix designed for the smaller screen. If you have 30 million then go for it, but reading this FAQ so I'm thinking your in a different budget range.

Why should I not want Dolby Digital?

Well actually you should but unless your mixing on a Dolby certified stage and have twelve grand or so in the budget for a license then your not going to get it. If your reading this you probably don't have the fee in your budget so time to change your expectations.

What is 0dB

0 db is the great gumpkin of audio...well thats a little extreme but 0 is where you set it. Db is "relative" scale so for instance film uses 0db "referenced to" -18 and for us -18 is zero other folks use other referances. The big confusion came with digital because a digital scale is referanced to "Digital Full Scale" the place beyond wich there is no more. People were used to crossing over 0 and then with digital it became imposable but its all smoke and mirrors. In the analoge world you set zero lowenough so that you had X amount of "head room" before it sounded bad (a very subjective standard) in digital people got told of a non subjective standard and it confused everyone.

Most of are now in the digital world and your 0dB is FS (full scale). Anything that goes over 0dBfs is going to clip and sound VERY bad. There is a good argument that nothing should be over -3dB because of the way digital to analog converters work there is a

"crest factor" that could put what appears to be a 0dB digital signal at +3dB on the analog side.

What is 3/2 pull down and how is that a problem for film AND video projects

Film runs @ 24 Fr / sec, Video runs @ 29.97 Fr /sec. (or more accurately it runs @ 60 fields (1/2 frames) per nominal second, and the clock is actually running .1% slow. hence the need for "Drop Frame Time Code")

24 doesn't divide in to 29.97 well so in film transfers the nominal speed of 30 is used.

In film to Video transfers the film FRAME is printed to 2 video FIELDS (1 Video Frame) the next film FRAME is printed to 3 video FIELDS (1 1/2 video Frames) and this pattern repeats until the film is done. The process adds 6 video Frames per second and makes every one happy...almost.

For technical & political reasons when color TV came in the frame rate was slowed down from 30 (old B&W TV was broadcast @ 30 Frames/sec.) to 29.97. So the film to tape transfer was done @ 30 BUT it will be played back @ 29.97, in other words it will be slowed down by .1%.

In post work where the final destination is back to film you have to take into account that when you go from syncing to video to syncing to film everything will speed up by .1%.

There are various ways around this issue and its not really a problem. But it is some thing to keep in mind. If you are staying in video you never have to worry about syncing back to film, but if the need ever comes up its doable.

Where this can be a problem is that the sound transferred in sync to the FILM portion of a project will be slowed down .1% relative to the sound on the DAT that it came from. So if sync sound needs to be taken from those DATs it needs to be digitised at a pulldown compensating sample rate so that it plays back in sync.

Some digital recorders can record at a rate that will do this automatically.

What is 30df used for

There really isn't a 30 df – there would be no need. Part of the general confusion revolves around various people/companies that over the years have used 30 and 29.97 interchangeably, so that for instance there were TC boxes that said 30df (when they should have been marked 29.97df). I think they thought they were making it simple for non "pros" but it has led to great confusion.

The counting for 30ndf is exactly the same as 29.97ndf, it's the time base that has changed. 29.97df on the other hand is a different counting system with the same timebase as 29.97ndf. What you really have is one parent TC (30ndf) with two errant children. The first child (29.97ndf) just runs a little slow (we all know people like that), the second child (29.97df) also runs slow but she's a bit smarter than her brother and tries to hide the fact by lying about her time so she appears to be on time.

Anyway

30ndf is used for music a lot and for sync to film (both primarily because the math is easier).

29.97ndf is used for syncing to video where the TC doesn't have to accurately reflect real world clock time (remember it's running slow)

29.97df is used for syncing to video where the TC does have to accurately reflect real world clock time, ie broadcast.

30df you would have to use 29.97df generator clocked to a pulled up clock. You would end up with TC that didn't reflect real world clock time, you'd have complicated math and you wouldn't be able to sync to any thing.....sounds like a new standard lets propose it.
