



Film Sound Q & A

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Film Sound Education

- Could you suggest a school?

- **How to learn the art of sound design?**
- **How to move into production?**
- **How does one get a job as a music editor or foley artist?** *More about Foley*
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What does a Production Sound Mixer do?

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- **What is the basic philosophy of sound design?**
- **What is the best word for 'the sound of a film'?**
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- **What percentage of the dialog in a movie is ADR?**
- **Which are the milestones in Film Sound Design?**
- **Why are many "B" movies almost entirely post dubbed?**

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To **Film Sound Design**

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Recording Foley

Christian Lund:

I am looking for Methods to make the steps and presence sound so real as possible..

- How do you make good perspective in your foley?
- How about using multiple Mikes?
- How far can you go with foley?

I mean can you do BG for airports or big car crashes only using foley. My experience is that a lot of the trick in using foley lies in the mixing of it. And of course adding reverb is obvious.

Mark Berger:

Some of the more interesting ways of recording foley (sounds made by the body interacting with objects) happened back in the old days of recording sound for features, when we had time, and when a few people could actively participate in all aspects of creating a soundtrack.

For example on Godfather II, Walter Murch and I recorded almost all of the foley in spaces that duplicated the real space of the scene. Footsteps on carpet? Go to Francis' screening room and record feet on carpet. Walking up tenement stairs? Find a building with marble steps and an echoed stairwell and Walter records me walking two flights up towards the mike. Then we switch. Great perspective changes - volume, presence, echo, diffusion, texture, detail - all real.

This could sometimes even be dangerous. One of the first things I ever recorded for a feature was the footsteps of all the henchmen running around Michael Corleone's house after the assassination attempt. Very late one moonlight night, we went to the Palace of the Legion of Honor in San Francisco - a very large, quiet parking lot bordered by a sidewalk leading to a grassy courtyard in front of the museum. We set the Sennheiser 405 microphone on the edge of the fountain, turned on the Nagra III, and proceeded to run around the lot, onto the sidewalk, even on the grass.

There was a struggle - Walter grabbed me, our feet scuffled, hands slapped

jackets, clothes were ripped, breathing got heavy, one of us was thrown to the ground and noisily subdued. It was all great 'foley' - in a real space, bouncing off the walls of the museum, great perspective, two people randomly running, changing surfaces lots of real 'grit' - do that a few times and you've got a great track.

There's nothing like foley. On camera sync? No problem. People walk at an amazingly constant rate. Get a metronome that has a light and calibrate the dial in frames/footstep. Measure the scenes you want to record. Go to the space, set the metronome, walk the walk. Back in the editing room, touch up the sync by cutting the track to picture.

What's the missing element today? Time. Enough time to think about the sound, set up the places, do the recording, cut the tracks, mix them, make everything sound fresh, new, real, different, unique.

How far can you go with foley? What you describe is by definition not foley per se. While foley would be a valuable added element in a car crash, it would be a difficult exercise to try to create a complete crash. Could be interesting, though. Some of the more interesting foley I have heard has been the sound of leaves and branches while in a forest, effects with rubber, footsteps in snow (while rock salt and cornstarch can sound great, nothing beats the real thing), and teeth grinding together. Water is generally less successful, unless recorded in a large pool.

In my opinion, half of the trick in using foley is in the recording, half is in the mixing, and half is in having a director that doesn't just shut it off, but takes the time to work with it.

Kevin Powell:

Nice story Mark! It makes sense to me. I am wondering if you don't add another layer of noise/ambience now and make the scene more noisy than you want it to be. Do you remember if the Foley was panned with the movement of the actors in Godfather II?

Mark Berger:

Yes, recording the foley outdoors does add another layer of ambience to the scene, but that is precisely the point. It's not just ambience, but foley in its own ambience. It's not just broth, but clams stewed in their own juice. The additional effects ambience can be reduced to compensate for the foley

ambiance.

Godfather II was released in 1974, and was in monaural. I believe the first major Dolby stereo release was Nashville, in 1975. In any event, my current practice is not to pan principal actors' foley, especially while they have on-screen dialogue. This avoids the interesting phenomenon of the feet walking right while the mouth is talking center. Background foley can be panned to give additional realism to the stereo field.

Edited excerpts from [CAS Forum](#) May, 1999

Original URL:<http://www.ideabuzz.com/cas/archive/forum/foley1.txt>

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Q & A about Foley

- What is foley?
 - Are there any foley seminars or a foley school?
 - How does one get a job as a music editor or foley artist?
 - A few things I've learned from foley sessions
-

- What's the trick to mix foley?
 - How far can you go with foley?
-

Reading:

- **The Art of Foley** <http://www.marblehead.net/foley>
- a tutorial designed to educate and inspire those interested in the craft of movie sound effects.
 - **Foley in Phantom Menace** <http://www.filmsound.org/starwars/phantomfoley.htm>
-

Film Sound Question & Answers



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Oxford University: "...an excellent collection of resources and links.."

How to create a singing river?

Tim Larkin:

I'm working on a Tolkien project based on Lord Of The Rings that has a location (Nimrodel) that has a singing river. I'm trying to do something different here. I'd like it to sound as if the river itself has a wonderful singing type voice within it. I've tried morphing, vocoding, mixing, you name it, and nothing has that natural feel to it.

Any suggestions would be greatly appreciated.

Rodger Pardee:

Have you tried dribbling water onto some metal chimes and mixing that sound in as an element? It's not a vocal element itself but it might give you a wet but "musical" bed that would allow you to more easily blend in some vox-type elements. (I'm guessing that so far your voice elements have been "sticking out" from the river sounds in an unnatural way. Something like this might help tie it together.

Kevin Powell:

Filters, comb filters, and time-varying comb filters are able to produce watery effects

Robbie Wood:

I have been recording a lot of water sounds up here in Idaho. The Salmon River and the Big Wood. By mixing a sound of the Headwaters trickles and adding to that the sound of eddys, surges it creates an almost tickling sound with a lot of variation. Some of the stereo tracks have been pitch shifted down as well

Edited excerpts from CAS Forum 1999 Message Thread: Singing River

Original URL:<http://www.ideabuzz.com/cas/webboard/>

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How to create a singing river?

Who to create Good Mech / Bad Mech sounding personalities?

Andrew D:

I am currently embarking on sound design for a game which involves Mech's (robots with personality..) having traditional characteristics of Good Mech / Bad Mech: which thus make them uniquely different sounding personalities.

What advice, previous experience, direction, would you offer other than the usual timbre changes such as: Good Mech: lighter, sounding and less discordant and visa vesa.. etc ?

Im asking because.. of the vastness of varying methods people use to give objects, characters , people, etc: signature sounds which define each of (in this case Mechs) objects in the environments in which they are placed.

Frank Kruse:

How about a more slick pneumatic/hydraulic combined with a liquid soft sounding interior feel for the good guys and painfull screeching sound (think of fingernails scratching a black board for instance) for the bad ones?

Matthew Grunau:

I have done similar work, not using voices for characters, but the interior and engine sounds of "good" and "bad" starships and vehicles. One thing I like to do is to have some dischord or off harmony for the "bad" guys. One trick I use is giving any bad character tone layers on the sound to form minor or 7th musical chords. This is nice because the American (and western) ear is used to hearing nice clean majors in their music when it is happy or joyous, and minors and other chord configurations when not. This gives them a subconscious knowledge that the evil character is "off" or wrong. Also, some distortion lends a nice hard edge to a voice and can do a lot to convey the evilness of a character.

Also, try incorporating a delay with a seperate effect on it. For example, a delay of 350 milliseconds with the delay at an altered pitch or with distortion or expansion. That gives a really eerie effect. Also, a nicely worked reverse reverb can be very good too, and when using tone layers or light effects on it, you can really get some dramatic sounding stuff.

Arno Peeters:

Good Mech:

- notch filter with a hi Q-factor that will give it a slight 'ring'...kinda singing sound
- maybe enhance it a little for some more overtones
- a light chorus can do the trick too

Bad Mech

- slight vibrato (AM) can give it a somewhat unreliable impression
 - dirten 'em a little (slight distortion, bit-reduction, ringmod)
 - if you have Autotune or Ultrapitch: try some pitch-following to equalise to tonal differentiation: a vocoder is just too simple (and tasteless) for that.
-

Tony:

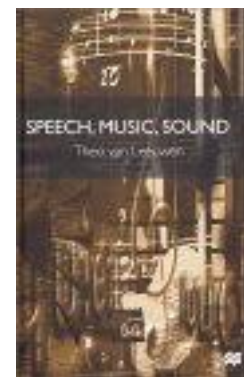
The voices I did usually were applications of pitch and chorus. It depends on the quality level you're asking. For deep down nasty, amplitude modulation at 50-70 Hz sine isn't so bad if you compress it with something like Magneto. Some light flanging added is neat too, if your characters are especially un-human.

This is your choice. My favorite character I did a voice for was a metallic cyborg. Once the thing awoke when first encountered, he bellows 'Attack Mode' and starts firing. He was a one-liner all the way. The longest thing he ever said was "This is a restricted area." Pitch and chorus.

Christian Koefoed:

You really need to read ["Speech, Music, Sound" by Theo van Leeuwen](#) (London 1999, Macmillan Press Ltd.)

Theo van Leeuwen applies linguistic concepts to the semiotics of sound, and explores in great detail the communicative aspects on practical examples.



Edited excerpts from [CAS webboard](#) and the [sound_design e-mailgroup](#)
discussion thread: Personalisation of Sounds for Machine Characters, Dec 2000



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Oxford University: "*...an excellent collection of resources and links..*"

[HOME](#)

How To Create Sound Effects

Links from www.audiotheatre.com/links.htm

CBC - Great Pictures

How to Create sfx by Tony Palermo.

SFX by Jack French

The Art of Foley by Philip Rodrigues Singer M.P.S.E.

Sound Effects by Tony Palermo.

Live Sound Effects

Tom Keith from PHC.

Tom Keith make sounds at home.

How we make sound effects - Adventures in Odyssey.

The Art of Sound Effects

Articles by RandyThom

Audio Theater's doors and other props

Book:

SOUND EFFECTS - Radio, TV, and Film

by Robert L Mott 1990 Focal Press



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Oxford University: "*...an excellent collection of resources and links..*"

VISIT



[HOME]

How to design a new language?

Ata Pinto:

Would it be possible for any of you to enlighten me in the process you guys go through when there's a need for a "new" language for...let's say... an alien character in a film. Burt said on some articles that he rearranged (edited) tibetan and other languages for some of the aliens in Star Wars. Now, how can this be done when you need to keep the intensity of the scene? I mean if you just cut and paste you might just get a very dull acting. Do you also solve this by telling an actor to improvise with his voice and language structure in the ADR stage?

Paulo Mendes: Sound editor, SIC Television, Portugal

Ata Pinto I did some alien voices already, using Eventide harmonizes, and found that best performances from the actors are achieved if their are listening to the processed sound instead of the dry feed, this way they can tweak words in order to avoid some of the artifacts these devices may introduce, thus improving speech intelligibility specially when using dramatic voice transformation always record a clean feed of the actors voice as well, just in case...

Chris Borders: Interplay Productions Voice Over Director

I recently had a interactive project that I had to get alien voices for. First off if you use good voice over talent, (ones who can get past the cartoony sounding stuff) you will find these actors to be very helpful in creating unique voices that you or I may never think of. After getting the base for what you want, you will find sweetening it with sound processors, etc. will add other elements to make it sound even more alien.

Kevin Powell:

Creating great alien or creature vocalizations is, in my opinion, the most difficult kind of sound fabrication there is. If you perform the vocalizations, it will help if you're the only one in the studio, or even the building... Well, at least my performances are much better then...

Randy Thom:

As Kevin says, there is no formula for this kind of process. What you do is to experiment. If you begin with an "exotic" human language as a base, then obviously the more diverse your samples are the more likely you will be successful. If you want to create a language with lots of moods, then your

Tibetan (or whatever) samples need to have those moods. You alter the speed and pitch of your samples. You play them backwards.

You edit them. You combine them with, as Kevin says, animal vocal sand anything else you can think of. (Finding snippets of animal vocals which will blend with human samples is also very much a trial and error process.)

Creating great alien or creature vocalizations is, in my opinion, the most difficult kind of sound fabrication there is.

Would it be possible for any of you to enlighten me in the process you guys go through when there's a need for a "new" language. There is no formula. I did some vocalizations for different creatures. Just imagine what your responses will be if you're interacting vocally and you will come up with different vocabularies. For example a happy vocabulary, sad vocabulary, angry vocabulary, questioning vocabulary, etc. If the creature is an alien, maybe you could process (your) voice electronically. If it is an animal, you could sweeten the fx with real animals

Ata Pinto:

When you say that you could sweeten animal sounds with vocalizations, how do you accomplish it without them sounding overlayed, but sounding like one. Do you use a special filter?

Jay Jennings:

I'd like to chime in regarding your question of 'overlaying' animal vocals and using 'special filters'. Many animals produce vocalizations that sound remarkably human, so they will lay in quite nicely without too much processing. For authentic samples, look to Hollywood Edge's "Animal Trax" series - very well recorded and interesting sounds. Also, if you are a ProTools user, check out some software called VocAlign. Originally developed for ADR editors (I think), it takes two sound files and, using one as the master clip, matches the envelope and energy curves of the slave clip. I saw a demo of it where two lines of dialogue, which were clearly different in enunciation and pitch, were matched together and it sounded incredible. You would have great results if you took a line of your newly-edited exotic human language and matched a baboon vocalization to it, for example. The energy curves would be identical, but the pitches and inflections would remain intact. VocAlign is sort of hard to describe...you really need to see it to understand what it does. If you're interested, I'll dig up some literature for you, or you can try searching the Web for it. Happy editing

Edited excerpts from CAS Archive

Original URL:<http://www.ideabuzz.com/cas/archive/forum/language设计.txt>

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To **Film Sound Design**
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How to make dialog and sound effects sound distant?

Charles Deenen:

Over the past years, I've often had to make dialog and sound effects sound distant or "on the street" since the original recordings were close up. Sometimes I've had good success, and sometimes I can't get it to sound good at all. Biggest problem always seems to be that it sounds too "verby" or processed.

Last night I watched Jacob the Liar and the background dialog sounded like I've always wanted to do have mine: real, and on the street. Does anybody know if this was obtain artificial, or if some of it was actually recorded in a narrow alley and street to obtain this effect ? If it was done artificially, can anybody tell me what I'm doing wrong ?

Randy Thom:

If you fiddle with the EQ (mostly by filtering out lots of lows and some highs), and play with reverb and delays, you can usually get it to sound pretty good. Try removing some of the mid-range from the reverb return (the area between 800 and 2k is often where the most identifiable and undesirable digital reverb artifacts occur)

Another technique is what is sometimes called "worldizing." This refers to playing back existing recordings through a speaker or speakers in real-world acoustic situations, and recording that playback with microphones so that the new recording takes on the acoustic characteristics of the place it was "re-recorded." Walter Murch used this technique to wonderful effect on films like American Grafitti. Obviously, you need a reasonably quiet place to record in order for this technique to work very well. Though the louder you do the playback, the less problematic ambient noise will be. Watch out for distortion, though!

Carl Warner:

Randy has given you excellent advice. I can still remember when all major recording studios and film post houses had acoustic echo chambers. Housed usually in the basement of the facility, the best ones were constructed like an intricate maze. These were numerous microphones and speakers placed throughout the various passageways in the maze and by selecting different mikes and speakers you could custom the audio to almost any desired reverb effect. Of course using EQ effectively also helped to achieve some really amazing results.

Edited excerpt from [CAS webboard](#).

(Message thread: Distanizing" dialog and sounds)

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To Film Sound Design & Theory
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How to make mouth foley to sound more like footsteps?

Jamey Scott

Does anyone on this list have any techniques for making mouth foley not sound like mouth foley. For example, I'm trying to make a milk carton run down a hallway and I need to come up with a sound for its footsteps. I've got a pretty good mouth sound that I made, but it still sounds like I made the sound with my mouth. Any ways of processing to disguise this?

Marc Farly

You could try sharpening the attacks with some compression. Just set an attack time of about 50-75 ms. A high-pass filter can help, too. Also try some very short delay to give you a fixed flange sound that notches out some frequencies and changes the character of the sound. Lastly, use the mouth foley as a timing and feel reference while you build more realistic sounds in sync on a separate track (Basically, replace the mouth sounds with real ones but keep the timing and volumes the same).

Scott Gershin

Or combine both elements together ... You could even use a [envelope follower](#) against your vocal for the milk inside & add some foley techniques....Experiment its the best success

Marc Farly

You could try sharpening the attacks with some compression. Just set an attack time of about 50-75 ms. A high-pass filter can help, too. Also try some very short delay to give you a fixed flange sound that notches out some frequencies and changes the character of the sound. Lastly, use the mouth foley as a timing and feel reference while you build more realistic sounds in sync on a separate track (Basically, replace the mouth sounds with real ones but keep the timing and volumes the same).

Jamey Scott

Here's what I ended up doing:

I used the sweeping part of the mouth foley (for the carton brushing) but I ran a high pass filter, compressed and did a sweeping pitch envelope to give

it a (forgive me) 'wacky edge'. Then I replaced the impact clicks with pitched up bubbles. It sounds very cute and cartoony like I had hoped for. So, thanks for the suggestions, they were right in line with what worked. I've got to look more into those envelope followers.

Jamey Scott

What is an envelope follower?

Charles Deenen

a device or plugin that "looks" at the envelope (how loud the waveform is) of 1 waveform, and applies it to another. This is often used for filtering. i.e.: the envelope follower looks at the envelope of the waveform and send this to the filter cut-off (with some ADSR smoothing).

Paul Gorman:

Wave Mechanics Sound Blender has an envelope follower with an optional sidechain....

message thread "Making mouth foley not. "

<http://www.soundspeedmovie.com/forums>

[Film Sound Questions & Answers](#)

Film Sound Design

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How to make thin red line lasersounds?

Justin:

I'm working on a game (Alien Resurrection) that requires a looping laser sound. This is for a weapon that fires a beam that is continuous until the gun runs out of ammo. The graphic looks like a thin red line (say from a laser pen) so its actually not a 'big' sound. However its a very unique one.

The closest example to what I can imagine the sound should be is like the laser in the Bond film that starts cutting the table as he lies tied to it. But this is a bit of an old sound and the game is set in a futuristic sci-fi environment so I'm not keen for this sound.

The sound will have to play at a sample rate of 22K and will be no longer than a 0.5 second file.

Have anyone created anything similiar that might point me in the right direction ?

Mark G. Reis:

I find that Metasynth is ideal for sounds of this sort. Don't worry about trying to create a 5 second sound. The audio generated by Metasynth tends to loop very easily.

Edited excerpts from http://www.egroups.com/list/sound_design Message thread: Laser sound

MetaSynth is a Mac-only sound design program which offers the capability of transforming any picture into a sound, or any sound into a picture, and permits manipulation of audio elements entirely in the graphic domain, manipulating MIDI files, sound and music as images in any Mac based paint or graphics application. The program allows the user to paint with sound, or compose with color and light.

MetaSynth generated sounds and MIDI music samples are heard daily on MTV commercials, on dozens of electronic, dance and underground CDs, and in new computer game soundtracks. <http://www.metasynth.com/>

MetaSynth was used in Matrix:

"Another program that I used was MetaSynth, and that really defined the sound

quality of a lot of things, giving them an extremely clean and distinct timbre while doing digital processing. I used it on anything that had to feel digital, not wanting to get grainy in an ugly way.."

http://www.prostudio.com/studiosound/june99/post_matrix.html

Read also **Sound Design of Star Wars** www.filmsound.org/starwars

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www.filmsound.org

How to make the sound of skull bashing?

K. Magliulo

I am working on a movie where a guy gets his skull bashed in with an old 16mm bolex. any ideas of what kind of props to use to make this sound? I want to stay away from sfx libraries since this is/has to be a unique sound...

Barry Thompson:

How about the ubiquitous cabbage mixed with breaking timber ?

Randy Thom:

The "standard" way of doing this is to create three or four elements. You probably want a juicy element (squeeze and smash melons), a bone-crunching element (wooden sticks breaking), and a metallic impact element (go to a junk yard and try banging various metallic objects about the size and density of the Bolex against other metal objects).

K. Magliulo

Yes definitely breaking wood seems to be working... I'll record some melons + cabbage later today...

Edited excerpts from CAS webboard message thread: skull bashing

Original <http://www.ideabuzz.com/cas/webboard/>

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To **Film Sound Design**

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How to make underwater sounds?

Frank.Casaretto:

Did anybody of you ever work on a film with underwater FX? I will have to do the sounddesign for a film about diving (80% under water) and I don't want to use only the bubbling that you can find in every CD-library. Sounds under water are different than in the air. How did (or would) you make them? filtered foley, hydrophone (if yes wich effects sound great with that kind of mic?) I also want to get the sounds of motorboats underwater. How would you get that sound?

David Farmer:

The actual sounds we hear underwater are drastically different than what we "enjoy" in our daily lives, or in a film experience. There's no such thing as "stereo" underwater. Since sound travels so much faster in water than in air, our ears don't know how to distinguish the timing difference, so we can't locate point of origin as being left, right, or the much overlooked up/down. This is evident when diving, when someone is trying to get your attention. You're taught to tap on your tank with your dive knife, (since yelling "hey!!" isn't an option underwater, especially with a regulator in your mouth). I can't tell you how many times I've heard this sound, and tried to locate where it's coming from, and not been able to. Sometimes I can't even find the person doing it.

It's a strange sensation, as we're in an environment that we're so poorly equipped (physically) to observe. The sound, even if distant, sounds like it's taking place "inside" your ears (which isn't far from the truth, considering the density of water vs. air).

I've found the range of sounds underwater to be very "clicky" and bright. "Being" underwater is very relaxing, but if I'm in a theatre, I'd personally find those sounds very annoying. Of course to each his own, this is just my opinion.

Historically speaking, underwater sounds are very muffled, as if water mutes high end. This is of course exactly backwards from what water actually does. But the audience has grown accustomed to hearing muffled sounds underwater, so they will expect that to some degree.

We're used to hearing the "dark" dreamy whale songs that have unearthly echoes. These are beautiful, but they are also very distant. Recordings of whales that are close will exhibit an entirely different "clicky" character.

Randy Thom:

I agree with david. Everything i have heard done with a hydrophone or similar is very pinched & hi-midrangey. I've had the best luck with pitch shifting normal water down octaves for ambient stuff and using a vocoder w/ chorus and reverb for "hard" effects.

really there is no hard fast rules because each source comes out to sound differently through experimentation. I suppose using heavy & drastic eq along with nice smooth reverb to hydrophone stuff may work, but I always ended up going different routes in the past without access to heavy eq (pre pro-tools days).

Frank's questions about underwater recording remind me that lots of the the ground to be covered in this group has already been covered by other groups. In case anyone here isn't aware of it, there are at least two other places on the web where people post questions relating to sound in media.

- One is the Cinema Audio Society's Web Board:
<http://www.ideabuzz.com/cas/webboard/>
- The other is a newsgroup: rec.arts.movies.production.sound

There have been quite a few questions and answers on the subject of underwater recording at both of those sites.

Basically, Frank, most people use normal microphones sealed in (non lubricated) condoms to do underwater recording. Just stick the mic far enough under the surface of the water so that the open end of the condom isn't submerged because there is no way you can make it completely water proof. You might be able to find someone who has an actual hydrophone and borrow it. (I wouldn't recommend buying one for a single project, unless you are rich.) Hydrophones tend to be noisier than acoustic mics.

Harry Cohen

Some folks I know at a facility called EFX recently did some underwater recordings ; they rented an underwater speaker , called a tactical transducer , from a company called Clark synthesis (clarksyn.com) , which had a very wide freq response . they borrowed a hydrophone , and played all kinds of stuff thru the clark transducer for the hydrophone to record . They got some interesting results . Myself , I have used the mic in a condom method , and have played sounds back into a floor monitor layed on top of a plastic pool cover , over at my parents house . My father thought I was absoutely out of my mind.

Charles Deenen:

I think we've all heard the foley in Waterworld. I, for one, was astounded by it's "reality" sound. Very low-tech sounding, very solid and not overdone. Are there any other movies that you know off that might have similar "real" fitting sounds ? 13th warrior was mentioned as one, which I agree with. Let me know. 2nd subject, anybody know how this reality sound was obtained in "waterworld" ?

Pluk:

I don't really recall the sound of Waterworld. As far as I remember it was done in a large water pit at One Step Up by Dan O'Connell and John Cucci.

Edited excerpts from http://www.egroups.com/list/sound_design

Message threads: "Underwater sounds ", "underwater recording and avoiding the same old questions", and "Realistic" Design

Read also "Sound Design of The Hunt for Red October" at <http://www.filmsound.org/articles/redoctober.htm>

to **Film Sound Design**

How to record wild animals?

Joel Newport:

I am preparing to try and record Deer sounds from a deer farm. Does anyone have any experience with wild animal recordings? Just looking for any tips before I go out. The films topic is deer hunting but you never see the deer so sound is very important. I am guessing that I will be burning a lot of tape waiting for a vocalization.

Randy Thom:

Two common ways to get captive animals to vocalize are:

- 1) Separate a mother and her baby. Both will often vocalize in order to find the other.
 - 2) Put a male, and a female in heat, in close proximity, but not too close. Both will vocalize.
-

Glen Trew:

Also, to avoid wasting tape and recording tons of unwanted silence, try to use a Deva. With the Deva, you can wait until the deer starts to speak before pressing the record button and it will start recording 10 second before the button was pressed.

Discussion thread "Whitetail Deer sounds"

<http://www.ideabuzz.com/cas/webboard>

[Film Sound Questions & Answers](#)

Film Sound Design

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How to record dialogue and gunshots?

William Franco

I am starting a feature next week and there's going to be a lot of gun fire in some of the scenes. I have never worked with guns on the set before. I would like to know what is the best way to handle a scene when there is dialogue and shooting going on? What kind of pads, etc. I should use? Safety for me and my boomer?

Randy Thom

It's extremely unlikely that any dialog recorded while a gun is being shot will wind up in the film when it's released. Those lines will almost certainly be ADR. Even if you do an excellent job of avoiding distortion from the muzzle blast while still being able to hear the dialog, the sound of the gunshot is very unlikely to be ideal. Blanks don't sound like real bullets. The acoustics of the place you are shooting in are likely to be less than ideal as well, and the gunshot will tend to describe the acoustic space it is in even more than the dialog will.

So, if you want your production sound to make it into the film you should lobby heavily to do wild lines on the set immediately after each set-up is finished, while the actors still have the right kind of energy. Also beg them to avoid off-screen gunshots at all times. That'll give you a better chance to get something useable while the camera is rolling.

I would insist on knowing exactly when each gun was to be fired. That will help to protect your ears and your track. Limiters wouldn't be a bad idea whenever a gun is going to be shot. Somewhere between 10 and 20dB of padding should be enough, depending on the gun, your distance from it, the acoustics of the place, your pre-amp, etc. You might want to use dynamic mics rather than condensers.

Obviously, you should request a rehearsal so that you can get in the right ballpark gain-wise and in terms of mic placement before you're expected to have any chance of getting a useable recording when the camera is rolling.

When recording both gun shots and dialogue, I never use a limiter or compressor on the mic channel as it may well not recover in time for dialogue. At the same time I turn the headphone amp down to zero(must have a control

that fully turns this off-no leakage allowed) and turn it back up for the lines. As Randy indicated, rehearsals are a must. Also, do not use Sennheiser 416's as they have been known to die in these situations (anecdotal evidence only). I use Schoeps and Neumanns. They bottom out on the initial shock wave but usually recover in time for the dialogue.

Edited excerpts from CAS webboard message thread: Gun Shots

Original <http://www.ideabuzz.com/cas/webboard/>

Visit [The Cinema Audio Society Message Archive](#)

To Film Sound Design

www.filmsound.org

How to reduce recorded unwanted noise?

Mark Berger:

With reference to reducing unwanted signal ("noise") in relation to what you want to hear (usually dialogue), I've found several general principles that are helpful....

(1) Berger's Law

The first, which is sometimes called "Berger's Law", is "These things work best when you need them least." A lot of hiss, crank the noise-reducing device way up, you really hear it work and the artifacts become distracting.

(2) Piranhas are better than sharks

Second principle is "Piranhas are better than sharks." This is just an aphoristic way of restating what Randy Thom describes - many small bites are more effective than one large gulp. This is because each noise-reducing device is doing a little bit, which it does best, and the sum adds up to a more pleasing, effective sound.

For example:

Use some No-Noise or DINR, A little bit of dynamic EQ, some manual gain riding, some Dolby 430, maybe some Behringer or DBX single ended NR, a low level background loop to mask any pumping, and the dialogue will sound more acceptable than trying to do everything with just No-Noise or just DINR.

The noise-reducing process literally saved two performances in Robert Duvall's "**Apostle**", where he and Miranda Richardson are dining at a Bayoufront restaurant.

Record companies use noise-reducing devices to clean up old jazz records.

Randy Thom:

The most difficult noise to remove, of course, is noise which changes in spectral content and level over time. Classic examples in film post include car and airplane-bys under production dialog. Wind and surf are frequent offenders too.

Digital noise reduction system saved us way back on **Forrest Gump** when cicadas covered Tom Hanks' dialog at the cemetery.

Read the unedited message thread [DINR vs No-Noise vs Cedar](#)

Edited excerpt from Message thread from [CAS Webboard](#) June 1999

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To **Film Sound Design**
www.filmsound.org

Could You suggest a school?

Charles Holzer:

I am currently a live sound eng. and am thinking about taking the "Sound for Film" course at Full Sail. Could You suggest a better school, or is it the best? I mainly want to save my ears and eventually my career. I have had no formal audio training, it was mainly [OTJ](#) training with another eng. also with no formal sound education. I'm currently very confused about the situation!!!

Randy Thom:

Full Sail is a very good school. There are a couple of graduates working at Skywalker Sound, and they're both excellent (Though these two people probably would have been excellent no matter where they'd gone to school.)

You didn't make it clear whether you are mainly interested in sound editing or mixing, so I'll assume you are interested in both.

You should insist that ProTools be an important part of the curriculum wherever you go, because it is by far the most common audio workstation you will encounter in the movie industry. The ideal learning environment in terms of technology would be one in which you are part of an accurately simulated real-world post production cycle.

What I mean by that is:

A film or video is being edited on an Avid picture editing system. You are required to begin working on the sound (and do "temp mixes") before the picture editing is finished (which is virtually always the case in the real world). Therefore, you have to not only find sounds (dialog, sound effects, and music), get them into ProTools, and edit them so that they match the picture, but you also have to learn how to "conform" (re-edit) your previously cut tracks so that they sync up with the latest version of the picture edit.

Finally, the sounds have to be mixed. Ideally you should get experience using digital and analog film mixing consoles, and learn the meaning of commonly used terms like "stems," "M & E," "LT-RT," "SVA," "track splitting," "pull down," "pull up," (which, by the way, has nothing to do with "pull down") "print density," etc. Any teacher who can't tell you without hesitation what any of those terms means isn't fully qualified to be teaching film sound.

Richard Portman, legendary film sound engineer and artist, is teaching at Florida State University in Tallahassee. That school would be high on my list if only because of him.

PS.....getting into film sound won't necessarily save your ears.

Randy Thom:

It has always been pretty difficult to learn any of the film crafts. I only know one or two people who have walked out of a film school and been offered a job. The tradition has been that you learn most of your craft by apprenticing yourself, for little or no pay, to someone who is established. The trick is in finding such a person, and being available and willing to drop everything else when that person gives you the fateful call.

Edited excerpts from CAS webboard message thread: Schools June 99

Original <http://www.ideabuzz.com/cas/webboard/>

M Orlowsk:

I am a graduate of Full Sail's Film and Video program. I can tell you that Full Sail is a great place with lots of gear. The main question you have to face is what you do with it. I graduated in Sept of 1999, and I am now a Sound Editor at a Post House in LA. I've worked on about 10 features, and have a good respect from my co-workers. Full Sail can teach you the industry and the gear. It is up to you to make something out of it.

Please remember this. If you do go to Full Sail, the moment you graduate DOESN'T make you an expert. Just be humble and work hard. Don't flaunt your experience. Full Sail is a 13 month program. You will spend about a month or two on each piece of gear. That doesn't qualify you to be an expert. The main complaint about Full Sail, is the students become "Know it all's" Companies HATE this.

Glen Trew:

All college graduates are "Know it alls", and it's probably a good thing: The confidence serves them well while that find out how much they don't know (I was one of the worst). (...) I think that a school's job is to inspire first and the learning will surely follow.

message thread Full Sail, anyone? 4th may 2000

<http://www.soundspeedmovie.com/forums>

Read other message threads about career in audio...

- [CAS Forum: Full Sail info](#)
- [CAS Forum: Colleges in California](#)
- [How to move into film production?](#)

[How to learn on-location audio?](#)

On The Job

To Film Sound Design
www.filmsound.org

How to learn the art of sound design?

Kevin Northway:

My 13-year-old son is interested in film production (particularly in sound and music composition and production).

What recommendations would you make as far as learning the art and post-high school education in the field of sound design?

Mark Berger:

The most important thing about using sound as a medium to express yourself is to have some ideas to express.

Then learn about the medium. Learn about ideas. In college, study art, music, science, literature, history, economics, philosophy, whatever interests you. It doesn't really matter what it is, as long as you are exposed to many different ways of thinking about the world, and develop a passion for expressing your ideas.

Watch lots of movies. Take lots of music courses, either performance or what used to be called 'music appreciation'. Concurrently, learn about the medium of sound.

Work for a radio station. Help with sound for theater. Record sounds. Don't get hung up on the particular kind of equipment used - the sound doesn't come out of the machines, it comes from your mind. Words on a page don't come from the typewriter, they come from the writer. Persistence furthers.

Tom Backus:

Well, I would say that learning to be musical helps. Then to just start learning the fundamentals of sound recording, microphones, electronics, acoustics, computers....

And most importantly watch lots of old cartoons. I don't know of any colleges that teach sound design. Most will give you a great education in audio recording, the rest comes with experience.

John Ardon:

I just want to recommend that you visit the Microphone University made by

DPA Microphones.

The Microphone University contains loads of info on microphones e.g. technology, applications etc. And the info is all for free. Even experienced sound designers can benefit from this site. It certainly helped me.

Visit the link below

- [DPA Microphones - Microphone University](#)

Message thread from [CAS Webboard](#) May, 1999

Read other message threads about career in audio...

- [CAS Forum: Full Sail info](#)
- [CAS Forum: Colleges in California](#)
- [Could you suggest a school for film sound?](#)
- [How to move into film production?](#)
- [How to learn on-location audio?](#)

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To Film Sound Design
www.filmsound.org

How to move into film production?

Carl Warner: September 1997

For more than 40 years I have been working in motion picture and video audio. At age 72, I still work as a motion picture production sound mixer specializing in location sound. The way I got my start, this business, you probably wouldn't consider. It has to do with a committed desire to achieve a goal and the guts to work and to do whatever is necessary to make that goal a reality.

As president of Warner Location Sound Services I am constantly contacted by young neophytes who want to learn about film/video sound. They DEMAND that I pay them an hourly rate of ten dollars (or more) while they are learning the job!

When I started I would travel (at my expense) to feature film locations to observe the sound crew. When they weren't busy on the set I would ask questions--a LOT of them. I got turned on to the business. Then I went to a technical school to learn about the technology of audio and read a ton of books about the subject.

Next, while I was at college I offered to work at a local radio station for FREE, to gain some professional experience working with audio. Now the next step, perhaps the most important in getting started---NETWORKING. In this business it's still WHO you know that is all important.

Once you have the technical knowledge and some on hands experience with audio, you still require something else to become a top notch motion picture production mixer or similar position---TALLENT!!! You see, this work is NOT just a CRAFT it is a combination craft and ART. You can learn the technology at school or from books, but unless you were born with an artistic gene, it is very unlikely that you will ever make a really first rate motion picture production mixer (or similar position). If you are really willing to work, then GO FOR IT!

Edited excerpts from CAS Archive

Original URL:<http://www.ideabuzz.com/cas/archive/forum/startingout.txt>

Visit [The Cinema Audio Society Message Archive](#)

To **Film Sound Design**
www.filmsound.org

How does one get a job as a music editor or foley artist?

Heidi Patalanp:

How does one get a job as a music editor or foley artist?

Randy Thom:

Here are a few words of advice:

- 1) Move to L.A. There are more jobs there which will "lead somewhere." So even though there are also more people looking for jobs there, it's still the place to be.
- 2) Read everything you can find about film sound in books, magazines, and on the Internet.
- 3) Find people who are doing the kind of work you want to do, and figure a way to make contact with them. You'll have to be resourceful. It's great training for the resourcefulness you'll need AFTER you "break in." Be persistent, but not SO persistent that you appear to be unstable, weird, or psychopathic.

Do an Internet search on "film sound" "video sound" "audio" etc. and you'll find lots of interesting info.

Edited excerpts from the message thread "soundtracks and foley" at CAS webboard Nov 1999

Randy Thom:

It has always been pretty difficult to learn any of the film crafts. I only know one or two people who have walked out of a film school and been offered a job.

The tradition has been that you learn most of your craft by apprenticing yourself, for little or no pay, to someone who is established. The trick is in finding such a person, and being available and willing to drop everything else when that person gives you the fateful call.

Visit CAS Webboard at <http://www.ideabuzz.com/cas/webboard/>

To Film Sound Design
www.filmsound.org

What does a Production Sound Mixer do?

- what kind of education do you need?

Carl Warner answers Rebecca Rees' questions

1. Do you work for a company or are you an independent mixer?

I operate Warner Location Sound Services. We work for independent film/video producers and the television networks providing them with complete location equipment recording packages, Production Mixer and Boom Person for feature film production, television series, television commercials and live performances.

2. What does a Production Sound Mixer do?

A Motion Picture Production Sound Mixer is responsible for recording film/video production dialogue and efx. He commands a crew consisting of one or more boom persons, a cable person and sometimes an Equipment Technician. The Sound Mixer will determine what mikes are used for every scene (or assign that responsibility to his boom person), he will operate the sound recorder, maintain the Sound Report, notify the director (or AD) of any sound problems, keep sound levels consistent, avoid distortion because of too high levels, watch for boom shadows, determine sound perspective after discussion with the director, record "room tone", and of course most important provide a sound track with clean, intelligible, first-rate audio quality.

3. What kind of projects have you worked on?

I have worked on feature films, dramatic television series, network and local television commercials, band concerts and live musical shows and music video. I worked on the CBS-TV television series ROUTE 66, Filmways THE BEACHCOMBER, ABC-TV AMERICAN SPORTSMAN, CBS-TV SUSPICION, and other television sports and dramatic series.

I worked on network television commercials for: Colgate, Frito Lay, Maiden Form Bras, Manhattan Shirts, General Electric, Ford, General Motors, Haines Hosiery, Fruit of The Loom, Scott Tissue, Fallstaff Beer, Miller Brewing co., Coca Cola, Wilson Sporting Goods and many other major TV commercials.

When I was much younger I worked on the big budget feature films as Production Sound Mixer today at 76 years of age, I have slowed down a bit and in feature film Production work mostly on medium and low budget features. Just finished one in Nashville, CHRISTMAS DIP.

4. What kind of equipment do you work with?

I have several equipment packages that I offer clients: Nagra 4.2 STC, HHB and Tascam DA-P1. For low budget features where TC is not required I find that the Tascam works out very well.

Our microphone inventory includes the usual pro mikes (Senn 815, Schoeps etc.) but, we use our low priced Okatava MC 012 and several low priced Audio Technica shotguns on most of our low budget feature work with really excellent results. On low budget features we use a Mackie or our Spirit Folio mixers (modified by us to offer more flexibility). Of course we have windscreen blimps for all of our shotguns. We almost always take our sound cart with lights and bells on location shoots. Our equipment packages include Motorola business band walkie talkies, one or two loud hailers, at least four wireless lav mikes and a 400 MHz headphone distribution transmitter with battery operated receivers.

5. Approximately how much do you make a year?

Because we do so much work for low budget producers (and also work on IATSE contracts) it is difficult to give you an accurate income figure. In general my boom operator will make at least \$250. a day plus time and a half over 50 hours. The production Sound Mixer (on non union projects) makes at least \$325. per day.

6. What kind of education and experience did you have prior to getting this job?

A professional Motion Picture Production Sound Mixer will usually first start as a boom operator. While a college degree or tech school diploma is not a requirement, to become a first rate pro Sound Mixer requires that this person have a good basic understanding of the psychology of sound and a good background of technical audio knowledge.

The human ear is somewhat complimented. Sudden loud sounds, for example, can cause hearing to become diminished affecting certain frequencies of audio more than others. Then human hearing will, after a long period of headphone listening, become "tired" and sounds will not be heard the same as "normal". There is of course much more to the psychology of sound, all of this in my opinion vital to someone desiring to become a really first rate professional Sound Mixer.

At least some formal learning in sound technology is very important. Courses at a trade school or college (or even just studying sound technology text books) in electronic theory, reverb and acoustics would be quite useful.

Finally, there is something that can't be learned--you either have it or you don't. You have to be born with an "ear" for sound. Somewhat like a musician's ear.

Edited excerpts from discussion thread "Please help me" March 2001 at CAS Webboard

<http://www.ideabuzz.com/cas/webboard>

To **Film Sound Design**

www.filmsound.org

How to learn on-location audio?

Jeff Adams:

Just wondering if there are any classes available that anyone can recommend for on-location audio.

We are moving away from simple documentary work to some actual "production" work, our boss would like to send us to some classes to pick up some pointers. Mostly dialogue with boom, lavs, etc., using either Beta or DV Cam.

Bob McHale

Hate to sound stupid, but with mic'ing techniques, experience is the only real teacher. If you were talking about a specific piece of equipment, you could get a manual and cram for a couple of days and probably know more than most techs in the field. But with acoustics, read all you want, but you must rent some mics and work it, work it, work it. Tell your boss to rent you a bunch of mics, some boom poles and a good location mixer and do lots of tests.

[Lennard:](#)

I recommend that you start learning something about microphones and microphone techniques. For this purpose I highly recommend the online Microphone University of DPA Microphones and it is absolutely free. I have learned a lot about mic'ing from this site.

Click on the link below and judge for yourself

[Microphone University](#)

Edited excerpts from CAS webboard message thread: Education June 99

Original <http://www.ideabuzz.com/cas/webboard/>

Visit [The Cinema Audio Society Message Archive](#)

To Film Sound Design
www.filmsound.org

What makes a good sound engineer ?

Tuomas Pietinen: (Sound Engineer, StoryFilmi, Finland)

Here are just some aspects that I've come across the few years that I've been in the business.

Sound engineering is basically service provided to the customer. You offer your expertise for a certain amount of money and be some kind of transparent medium between the artist and the sound on tape. You have to have your own ideas which to present to the customer when needed, but follow THEIR ideas and think of the best way to record them.

What makes a good sound engineer ?

- **Good ears**
- **Reliability is everything**
- **Good understanding of electric equipment in general and especially sound recording equipment**
- **Ability to make field repairs, if possible**
- **Very good knowledge of how to interact with HUMANS**
 - **The movie-making species.**
- **Patient mind and will to always try something new**
- **Good self-discipline to keep gear in good shape**

"Very good knowledge of how to interact with HUMANS.."

Carl Warner:

It is rare that I hear of professionals in the motion picture sound endeavor recognize that it is not just excellent technical credentials that are important for a Production Sound Mixer.

I know of several that are tops when it comes to the technology of recording sound, but they do not have "people skills". Our job on the set of a film production often requires that we work out problems with the DP, the director, producer, set designer, wardrobe and others. There are several really first rate production sound mixers that rarely get hired because they can not get along with the DP, director and other co-workers. I am delighted that Tuomas included this very important aspect in his list.

Edited excerpts from the message thread "sound engineering is a social job" at CAS webboard feb 1998

Visit CAS Webboard at <http://www.ideabuzz.com/cas/webboard/>

To Film Sound Design

www.filmsound.org

What effect has sound on a film?

Victoria Wood :

- What effect has sound (mainly music) on a film?

Carl Warner:

1. Music sets mood. Very much the same as lighting sets mood for cinematography.

2. Music (and efx) help tell the story by adding additional punch to the visual images.

3. Music (and efx) can propel the audience to another time zone, past and future.

4. Dialogue tells the story

WHY are you not concerned with the dialogue?

Look at a motion picture feature script...the pages are covered with DIALOGUE. It is the sound of the human voice that can soothe or repel. It is the sound of the human voice that indicate joy, sadness, fear, apprehension, anger... all human emotions.

Often an off camera voice can instantly convey to the audience an sudden change in the scenes mood. We can go from a gay, happy scene to frightening horror when a blood curdling scream suddenly explodes. In short, sound alone can tell a story.

Story telling was around since man learned to speak a common language. Then there was radio drama; human dialogue with music and efx.

Christian Bass:

Your question is one which is commonly asked when studying films philosophically speaking. As Carl said the spoken voice in a soundtrack is frequently in most conventional films, the driving force behind the story telling.

However, the one aspect which you should always remember in your research is that ultimately there are no rules in the creation of a track (discounting the technical requirements of course). The most recent and positive viewpoint about sound is that it works utterly and completely in conjunction with picture and visa-versa. The two should be seen as interacting as seamlessly as possible to create a whole, regardless of the individual components. It is vital to remember this.

Separatism amongst the various creative aspects of film making will always be around on a professional level, however this should never be apparent to any audience. They as observers are granted the right (by pure nature of their position) not to have to be exposed to the fractionalism inherent in any creative medium.

efx = sound effects

Edited excerpts from CAS Forum, 1999

Original URL: <http://www.ideabuzz.com/cas/archive/forum/discusions.txt>

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To **Film Sound Design**
www.filmsound.org

What is the basic philosophy of sound design?

Cedric Denooz:

I'm french, I'm sound engineer in a post production studio: specialized in advertisings, and we've recently opened a sound design: department, where I'm working.: Of course in France sound design is a new idea, and unfortunately not correctly: (on my own advice) interpreted:

Today, big productions realized how they could push the: frontier of film making, thanks to computerizing they're visualizing: new ways to get rid off money problems. by tradition (thanks to our: nouvelle vague) french productions were specialized on "cheap productions": (with some exceptions) but, to my idea we've got a big delay with: the actual way to do it.: Advertising are a good way to experiment new technologies and new possibilities,: that's why french sound design companies are especially working on it.

But I think that we need to learn from people who's got the experience to: first, convince producers of the importance of sound design philosophy, and second to avoid to do mistakes which could increase our delay.

I ask you these questions:

- **What is the basic philosophy of sound design?**
 - **Do we have to built studios including foley artists, editors, sound effects, in the same company?**
 - **Do we have to buy all sound effects libraries, or do we have to make it by our own?**
-

Randy Thom:

Sound Design is still a new term in the USA, as well as in France. And to be honest, there is very little agreement about what it means. Ben Burt and Walter Murch brought the title to our consciousness in the late 1970s, mostly through their work on (respectively) "Star Wars" and "Apocalypse Now."

In film and video there have always been people who "designed sound" in various ways. Composers obviously design sound. But production mixers design sound too. When a production mixer makes the decision to expend the enormous effort necessary to get useable tracks on location with mics on booms, rather than take the path of least resistance and put radio

mics on the actors, he or she is making a sound design decision, and a very important one.

The term sound design is used most often to refer to the process of fabricating "special" sound effects, whether the raw sounds for that process come from new recordings, sounds from existing libraries, or a combination. But that is only one small part of the larger vision Walter and Ben had in mind when they did their groundbreaking work 25 years ago. Their idea was that many films could benefit enormously from having a sort of "Director Of Sound," with responsibilities somewhat analogous to that of the film's Production Designer or the Director Of Photography. Someone who, working with the film's Director, Writer, Editor, etc. could try to figure out how to coordinate the film's appeal to the ear. This has been a very difficult vision to bring into common practice.

Most Directors have (because most film schools don't teach them otherwise) a fairly narrow view of what is possible in terms of using sound in their films. And those who have grand ideas about how sound might be used tend to have no idea how to bring those ideas into the reality of the film making process. They don't know how to allow sound to influence creative decisions in the other crafts. They too often verbalize their grand ideas in post production, when it's much too late to realize them fully.

So, sound winds up being a sort of decoration applied to a pre-determined structure which was designed with little or no consciousness of how to incorporate sound in the first place. So, we have loud movies. Movies in which the music, sound effects, and dialog clash more often than they enhance each other. We have ingeniously crafted sound effects. We have a dozen or so composers making enormous sums of money attempting, mostly in vain, to write two hours of great music in three weeks. We have lots of people calling themselves sound designers who don't deserve the title. But we have very little sound design in the fullest sense of the word. Because the Industry isn't ready for it. Not the Film Industry, and not the Video Industry, and certainly not the Computer Industry.

Because, like you, none of us is quite sure how to do it. But it's out there to be done. There are vast areas to be explored in movie sound, video sound, and computer sound. Things none of us has dreamed of yet. And I'm not only talking about new technology. I mean new creative ideas, storytelling ideas. New ways to collaborate, new ways to make visual and aural information enrich each other and become indistinguishable as an experience.

Sound is NOT there to "help the visuals." That's kindergarten film making. Anyone who says that "film is a visual medium" is being foolish and naive. Sound, when given half a chance, is no less important to the audience's experience than the pictures. And it doesn't have to be as loud as a train wreck to do it. I've been hired to write a book on creative approaches to using sound in media storytelling, and I'll be working on it for the next few months. But it's up to you, Cedric, as much as me, to flesh out this vague idea we have called "Sound Design."

Read more about Randy thoughts in.. **Designing A Movie For Sound**

http://filmsound.studienet.org/articles/designing_for_sound.htm

Buck:

The term 'sound design' might be new but the idea has been around for centuries. As early as Greek theater, Shakespearean plays and even to the 1933 version of King Kong - where Murray Spivak created awesome sounds by going out in the field and recording lions, tigers and other natural beasts, bringing the sounds into the studio and speeding them up, slowing them down or whatever.

Walter Murch (Apocalypse Now) just 'coined the phrase'. People are just afraid to use the term as they fear they may be laughed at because it's a fairly new term. The truth is, many of us sound professionals have been 'designing' sounds all along and may not have known it. The only problem is, however, the term has been applied too loosely (but there's no official criteria for using it).

My point is this: low budget or high budget a sound designer is only limited by his/her imagination. Another thing: it's wise to gather sound fx libraries as well as record your own. Not only can you manipulate the library sounds, but you can compare the acoustic information on them to any sounds you may create on your own.

P.S. I'm a sound fx designer in Canada who creates custom sound fx.

I'm also writing a book on sfx including a complete history of sfx and recorded sound //Buck.

Edited excerpt from [CAS Forum](#): This Thing Called Sound Design on May 31, 1998

Original URL: http://www.ideabuzz.com/cas/archive/forum/sound_design02.txt

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To **Film Sound Design & Theory**

www.filmsound.org

What is the best word for 'the sound of a film'?

Xavier Sanchez:

What is the best word for 'the sound of a film'?

Soundtrack?

I don't mean "M&E", or sound design; just a general word for dialogue + foley + music + sound effects, etc.

I think the word soundtrack is sort of OK, but it could also suggest the music CD. What is the best word?

John Vengrouskie:

All of the previous suggestions are fine, I use them as well as mentioning that the MUSIC of the film is The Score (unless you're talking to a composer who'll think of The Score as a pile of paper with notes on it!)

While The Soundtrack is all of what you hear at the theater... that IS after all where the technical term 'sound track' comes from.

Mark Berger:

A very good question that raises all sorts of issues about the way people perceive films.

Only people who work in the film industry break down the sound of a film into dialogue + music + effects + foley. When I used to tell people that "I do soundtracks for films," their invariable response was, "Oh, are you a composer?" You are right in assuming that 'soundtrack' means 'music' to the general public. My current response is "I do sound for films" or "I'm responsible for the way a film sounds." This usually opens up a discussion of what film sound is.

Looking to the picture for direction is helpful. The closest word used to describe 'the look of a film' is perhaps 'the visuals'. I don't see anything wrong with using 'the sound of a film' or 'the sound' or 'film sound' to describe the sound of a film.

M&E = Music & (sound) Effects

Edited excerpt from [CAS webboard](#) (message thread: I'm looking for a word..)

Visit [The Cinema Audio Society Message Archive](#) - over 100 archived message threads

To **Film Sound Design & Theory**
www.filmsound.org

What is the sound of nothing?

Charles Deenen:

I need to make a sound for about fifty 20x20 rooms that LITERALLY have nothing happening inside. The walls are 10 feet thick solid rock walls. The rooms are underground. I've tried everything that is the usual normal filler, but it either sounds like standard tape-hiss, too modern, or too much like wind...

Mark Berger:

You really want to know "what is the sound of nothing?" We were faced with a similar problem in "The English Patient." What is the sound of a desert, with no wind, nothing happening?

The sound of nothing is hard to convey by itself. It is best accomplished by contrasting it with the sounds of something that suddenly go away. The more the contrast, either in volume, density, or variety of sounds that completely go away when you enter the room, the greater the sense of emptiness and isolation.

To emphasize the silence, perhaps a single, very dead creak or pop, to emphasize that there is nothing else happening. Again, in "The English Patient." we used the sound of a single cricket-like insect to reinforce the feeling that there was nothing else, especially when it stopped.

Charles Deenen:

That certainly helps, since it confirms my original thoughts. Last night (well, actually, this morning:), I started to get to something I finally liked. We recorded super-small sounding wood wicker sounds as far as the foley-room allowed us to go from the mic. Playing those really quiet on very tamed down room-hiss seemed to work.

Mark, the problem is that this stuff is for an interactive game, I can almost never predict if there is a big sounding room in front of it, so I can't use that trick (wish I could!!:)

Randy Thom:

In the movie "Contact" we literally put no sound at all into certain parts of two scenes, and it seemed to work pretty well. We were a little concerned that people would think something had happened to the theater sound system, so in the opening sequence we gradually faded the sound out rather than ending it abruptly.

Edited excerpt from [CAS webboard](#) (message thread: small room ambience - no sound)

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To Film Sound Design & Theory

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What is the total sound budgets in American movies?

Eric Nelson:

I am wondering what the (total) sound budgets are on American movies?

Randy Thom:

You didn't make clear whether you were including music in "sound (postproduction) on an average budget Hollywood film." If you include the cost of music, then the sound budget for a "typical Hollywood film" is in the ballpark of 5% of the cost of the film (excluding publicity). Without music it's less than half that. Obviously, there is enormous variation, but I think the 5% figure isn't too far off as an average.

Eric Nelson:

Gee, that isn't much. I'd say in Norway it's 0.5% music; 0.5% dialogue, ADR, Foley, SFX; and 0.5% mix. If you're really lucky 0.5% trailer (including picture editing). Usually there's no extra money for the trailer/publicity, and the trailer is done from the budget of the film. And of course there isn't any money left at the end of the project.

Hans Gilbert:

Wow, how can you expect people to take sound seriously if they only spend a few percent of the film budget on the other 50% of the movie; sound...

- "Hi mister producer I'd like to use sound in storytelling".

- "Oh that's no problem my son, we'll give the composer an enormous sum of money, and what about minimum wage for you?"

Hans Gilbert

Edited excerpts from CAS webboard message thread: big-time trickle-down

What is the total sound budgets in an American movies?

Original <http://www.ideabuzz.com/cas/webboard/>

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ADR Discussion

James Crocket to CAS forum:

- Approximately what percentage of the dialog in a movie is ADR?
- Is it reserved mostly for outdoor scenes or do unpaddable, large, live rooms demand ADR dialog as well?
- Is there a standard or well known system of processing the voices to fit the environment seamlessly?
- Is ADR an absolute last resort that should be avoided at all costs, or just an everyday reality of the job?
- If your sync audio is unusable, it is good to record the dialog wild, true?
- Is this almost always more successful than looping it in post? (Provided of course that the actor can duplicate his/her lines from the take)

Carl Warner:

ADR is a film technique that is much in heated debate. True film purists will argue that ADR no matter how technically correct can not give a scene the same punch, mood and realism that original production dialogue can. Those of us who have been around this business for a while generally agree with this philosophy. There are however, some situations where ADR is unnecessary evil that directors and sound editors have used effectively. Perhaps the best excuse for ADR is when an actors crews up a name, date or other important piece of dialogue. This screw-up can be corrected, of course by ADR.

Sometimes a director likes the staging and visual part of a scene, but does not like the way the actor delivered his lines. Again ADR is a useful tool to get a better reading of the dialogue. Then, there is the situation when there is just too much background noise because of location logistics. A really good production sound mixers should generally be able to get at least 90% of the

production sound on a feature film clean enough when no ADR is required. This is what separates the really great mixers from the ones with little experience and no talent. Some directors are very sensitive to the sound portion of a film and demand to use as much location production as possible. They really would like to have every word original production sound. Other directors, (especially new to the profession and those getting by with little or no real talent) are not as sensitive to the sound. They have not yet been able to understand the difference between original dialogue and ADR. Is hard to give you an exact figure on percentages, but in general most feature films today will have about 90% original production sound, the rest ADR. I have worked on features that were 100% production sound (including wild track dialogue recorded on location. Many of the spaghetti westerns were 100% ADR.

Randy Thom:

I guess everybody knew I'd chime-in on this one. I agree with most of what Carl has said. But I'd tend to give a different estimate of the ratio of production dialog to ADR. Many of the films I work on are "action-adventure" movies which have notoriously noisy sets. So they tend to have a much higher percentage of ADR. The movie "Contact," for example, was about 60% production and 40% ADR. "Apocalypse Now" was about 80 to 90% ADR.

Carl was right to point out that a significant amount of ADR is done in order to change the actor's performance. Sometimes lines are re-written, or the actor may have had a cold and sounded stuffed-up on the day they shot the scene, etc. The most difficult thing about integrating ADR into most films is that it is unusual for entire scenes to be ADRd. The poor dialog re-recording mixer is often asked by the Director to stick one or two words of ADR into the middle of a line of dialog which is otherwise "production." This is probably the single most technically difficult process in all of sound mixing. There are lots of techniques used to make ADR sound more like well-recorded production dialog.

The best way is to record the ADR in an acoustic situation as close as possible to the one on the set, except without the noise of the set. Using the same mic as the production mic helps. The re-recording mixer uses eq, reverb, digital pitch-changing devices, and lots of other boxes to try to make the ADR sound like production. The dialog and ADR editors have typically also used systems (like VocAlign, for ProTools) which compare an ADR line to a production line and alter the duration of each ADR word in order to bring it closer to perfect

lip-sync. In addition, they've used many traditional techniques, including the one of extending the "room tone" or "outdoor air" under ADR lines so that the production ambience doesn't disappear whenever an ADR line is used.

Edited excerpts from [CAS Forum](#), January, 1999

Original URL: <http://www.ideabuzz.com/cas/archive/forum/adr.txt>

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To **Film Sound Design**
www.filmsound.org

Milestones in Film Sound Design

Matthias Lempert:

I am preparing lectures on sounddesign for films and would like to collect some opinions on which films you consider to be milestones in filmsounddesign from the beginning till today.

Randy Thom:

The term "sound design" is a loaded one in this context because most of the films likely to appear on such a list had nobody credited as "sound designer." Nevertheless...

I'm a huge fan of the films from the nineteen seventies and early eighties produced by the so-called "Movie Brat" directors, so most of the following quickly composed, short list is from them:

- Citizen Kane
 - Touch Of Evil
 - The Birds
 - The Conversation
 - American Graffiti
 - Star Wars
 - McCabe And Mrs. Miller
 - Apocalypse Now
 - Once Upon A Time In The West
 - The Black Stallion
 - Raiders Of The Lost Ark
 - Eraserhead
 - Raging Bull
 - Saving Private Ryan
-

Elisabeth Weis:

I agree with Randy that the phrase "good sound design" is problematic. I concur completely with Randy's list and assessment of the best sound period. If you want some other films with interesting sound, you might add

- Blade Runner,

- The Marriage of Maria Braun,
- Silence of the Lambs,
- and almost any film by Godard

(though his approach is entirely different).

I'm not sure whether they have good sound design per se, but they are interesting to listen to closely. If you are trying to put things in a historical perspective you might want to check out my book "Film Sound: Theory and Practice", which I mention not to advertise it but because I created it specifically to teach the same sort of course you are doing and so put together the readings I needed to accompany the course. It suggests a few films with historically interesting sound tracks and a few experimental filmmakers, such as Peter Kubelka, who have an interest in sound and provides essays on why they are interesting.

Randy Thom:

All excellent choices, I think. It occurs to me to add

- Das Boot,
 - Rumblefish, and
 - The Right Stuff.
-

Christian Bass:

I particularly agree with Randy on looking at Rumblefish. It's a particularly great example of marrying music score to the effects tracks and at times the boundary between the two is certainly unrecognisable. It was obvious that Stewart Copeland seemed to work closely with the effects crew to accomplish this result. Very impressive...even if the movie isn't...!

How about

- 'THX 1138'.

Surely one of the most surreal tracks to ever to be done for a sci-fi...and one of Walter Murch's 'first' (and perhaps one of his best?) feature-length tracks.

If you can't get it perhaps

- '2001'?

(though I guess it's not really in the same domain...)

Gustavo Costantini:

I agree with many of the lists I read. So I suggest to add few films not so recent, if we understand for "good filmsound design" those films that introduced new forms of using sound.

- M Fritz Lang
- The Testament of Dr. Mabuse Fritz Lang
- Un Condamne a mort s'est echappe Robert Bresson
- Solaris Andrei Tarkovsky
- Traffic Jacques Tati

More recent:

- Sacrifice Andrei Tarkovsky (to [Sound in Tarkovski's Sacrifice](#))
- Ran Akira Kurosawa
- Dracula Francis Ford Coppola
- Alien Ridely Scott

Respect Godard, I think many of his films present very good ideas but like a kind of experiment. So, in my modest opinion, I suggest one film in which he develops a complex and definitive version of former experiences: Nouvelle Vague (1990).

Randy Thom:

Hi, Christian!

You're right about Rumblefish. There was definitely more collaboration between Richard Beggs (the Sound Designer) and Stuart Copeland (the Composer) than there is on the typical film. I've invited Richard to participate in the list, and I'm hoping he can give us a few details about that collaboration.

Matthias Lempert:

Hi everybody,

1. Thanks a lot, the response on my request was overwhelming, and I am glad to find a place, where discussions on this subject are possible.

2. Dear Randy, I know the term sounddesign is a critical one, but I used it nevertheless, because first, sounddesign takes place regardless if the director, the editor or a specific sounddesigner is in charge of it, and second to make a distinction towards filmmusic.

3. Dear Elisabeth, of course I already own and appreciate your book.

Rodger Pardee:

It's a good list of titles that have been given so far. I'd like to add "The Exorcist", which had an influential and unusual approach to its track. The supervising sound editor was Fred Brown, the lead re-recording mixer was Buzz Knudsen, and the director who was molding the whole process was William Friedkin.

One of the recurring themes in this discussion group is that not all directors are intimately involved in the details of the sound editing and mix. Friedkin is one of the exceptions. (Sometime I may have to post some of my experiences on "To Live and Die in L.A.")

But let me nominate another sound designer for consideration, someone you might not have heard of, although you've certainly heard his work. If good sound design is meant to immerse the audience in a compelling "sonic world" that profoundly enriches the experience of the film to the extent that it forms a kind of distinct vocabulary of its own, then perhaps one of the greatest sound designers was a man named Tregoweth Brown.

Treg Brown was the editor who created the sound effects for all those classic old Warner Brothers cartoons, and his library of sounds still echoes around in my subconscious: a rabbit falls through the sky roaring like a plane in a steep dive; a duck gets flattened against a wall and peels free with a rubbery balloon stretch and a plunger coming unstuck.

Not what you'd ordinarily think of as art films, certainly, yet there was a lot of artistry at work in them.

A discussion tread about good film sound design posted at the E-mail Group "Sound Article List"
URL <http://www.egroups.com/list/sound-article-list>

/Sven E Carlsson
Teacher in Media
Sweden

The sound-article-list eGroup is a service at Film Sound Design & Theory" <http://www.filmsound.org>
(a resource site for sound design)

to **Film Sound Design**
<http://www.filmsound.org>

Low Budget Sound

James Crocket to CAS Forum

- Does anybody know why so many "B" movies are almost entirely post dubbed?

I was under the impression that post sound was more expensive than recording on set.

Rodger Pardee:

Sounds like a classic case of false economizing. By skimping on production sound, the producers have to make up the difference in post. Too often they'll budget so little for production sound that they end up with an inexperienced mixer, or if they get a good mixer they can hamper the work in others ways (such as not budgeting for a good boom person or an adequate equipment package.)

I suspect that many low budget producers actually know that they will pay for this approach later, but sometimes they are raising money as they go along, in stages, and that they're hoping once they have a version of the film cut, with a temp mix, that this may be used to raise more funds. This may get the movie made, but it's not a good way to do sound work.

Bob McHale:

I agree wholeheartedly with Roger! This a terrible oversight by MOST directors with the "fix-it-in-the-mix mentality. It shows a complete lack of regard for sound as half the medium they are working in, and a complete lack of understanding or experience. This attitude of the low budget Director or Producer (often the same person) makes a bad movie what it is. Bad sound ruins a movie far more that a bad cut in editing. You can blink and miss a glitch in print or editing, but people do not have ear lids.

Bad sound is the MOST OFFENSIVE aspect to a bad movie. Inexperienced Directors are so concerned about time, that they forget to make a movie

correctly. They can save so much time, money, aggravation and embarrassment by taking time to get more wild sound, record lines wild with their actors before they move to the opposite coast or continent or get a day job. They think that if they use an SM 58 on the set since it's free instead of renting good equipment, that they are being savvy and displaying good business habits.

Pardon the raving, but I have been involved in too many movies with good scripts and actors to be destroyed by impatience and short-sightedness.

Edited excerpts from [CAS Forum](#) April, 1999

Original URL: <http://www.ideabuzz.com/cas/archive/forum/budget.txt>

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