

An Open Letter from your Sound Department

Originally written by [John Coffey](#), with help from [Randy Thom](#), [Jeff Wexler](#), [Noah Timan](#), [Mike Hall](#), [John Garrett](#), [Scott Smith](#), [Rob Young](#), [Mike Filosa](#), [Wolf Seeberg](#), [Darren Brisker](#), [Charles Wilborn](#), [Todd Russell](#), [Brydon Baker](#), [Larry Long](#), [Glen Trew](#), [Dave Schaaf](#), [Charles Tomaras](#), [Klay Anderson](#), [Brian Shennan](#), [Hans Hansen](#), [David Marks](#), [Bob Gravenor](#), [Von Varga](#), [Mark Steinbeck](#), [Carl Cardin](#), [Eric Toline](#), [Joseph Cancila](#), [Stu Fox](#), [Peter Devlin](#), [Matt Nicolay](#) and many others.

This letter is being written by audio professionals to help directors and producers understand how good sound can be recorded on the set. We want to help you make the best film possible.

For this piece, we will not discuss the topic of mixing itself, as this is the "hocus pocus" part that you trust us to do so well.

We want you to have information that will enable you to evaluate what is interfering with good sound, before a hasty decision is made that can harm the quality of your film's sound. To help you make your decision you need to know about some of the obstacles that we sound people face, before we can even begin to get usable production sound on the set.

This is after all, the age day of digital sound. Theaters have wonderful [THX](#) (the audience IS listening) and [SDDS](#) with 5.1 surround. Home audio is often better than many theaters as a sophisticated audience demands DVDs with 24 bits. Yet, today's sound at it's source on set is suffering like never before.

THE PROBLEM

We, the sound crew, are the ones that you depend on to create and protect YOUR original sound tracks during production.

Unlike the work of the majority of the people who are working for on-camera results, the mixer's efforts can not be "seen" on the set. Almost no one hears what the microphone picks up. Too few are sure just what we do. Only the most obviously bad noises are even brought up for discussion.

Included in our job is to monitor the sets for unnecessary, accidental, ignorant and sometimes even malicious actions or lack of actions that may compromise your sound track. To emphasize this point: WE DO THIS SO YOU WILL HAVE THE BEST TRACKS POSSIBLE; IT IS NOT FOR US.

We are too often frustrated by the state of conditions that now exist on most sets. Many times we are expected to solve all sound problems alone. Instead, this should always be a cooperative effort with the assistant directors and other crafts.

Sound mixers are often perceived as pests or even a hindrance to the film's progress. We don't like being put in this untenable position because it is humiliating and unnecessary. We don't like to be considered adversarial to the rest of the production and we certainly don't want to be the "sound police"!

A mixer on a tough show, who fights alone to get you good sound, stands a good chance of burning out from all the excuses and defenses put up. It's hard to put it all out there without support. The temptation is to cave into the pressure and just go with the flow, and no good can come when that happens.

The problems that we face may lead you to believe that good sound cannot be achieved without set disruptions and added costs. This would not be necessary if reasonable measures are anticipated and endorsed by you both in pre-production and during production.

We know the limitations of our equipment. For example, microphones are just tools, they don't make miracles happen. If on-set audio problems are not dealt with immediately, they will only be back to haunt you again in postproduction.

You can help us do a better job for you. Good sound can most often be achieved by using reasonable preparation to avoid pitfalls.

We need your understanding and your backing.

THEN AND NOW

To understand the sorry state of audio affairs today, you must go back in time.

There once existed a major studio system where an assembly line of crafts worked together to churn out film products. No matter which studio we worked at, all crafts understood they were expected to take reasonable measures within their purview to allow for good sound recordings. It was instilled as part of their job description. These duties were passed on to the young apprentices. Grips cut microphone shadows sharply with flags. The electric department would change out a noisy light that buzzed. Camera assistants would try everything possible to quiet camera noise and many is the time that an operator had blankets and pillows over them and the noisy camera. Every other craft would do whatever was deemed reasonable to help get good sound, because it was considered to be part of their job. No one had to try to persuade them to do it. It was an era where reasonable co-operation with the Sound Department was the normal way to make good movies.

Today's crafts still have pride in their jobs but it seems they NO LONGER consider sound assistance to be a part of their job description. The problems began when the in-house studio training system broke down as non-union independent films proliferated. Along the way, the process of learning what their jobs entailed changed the way they perceived sound. The other crafts now don't think they should do anything to help YOU get good sound for YOUR movie. There is no longer an apprenticeship system to pass along this knowledge. They now learn on the job under fire through osmosis.

They must now be requested in each instance to do reasonable things, which are necessary to protect YOUR sound tracks, because they just don't consider it to be a part of their job anymore.

The Sound Department would gladly cut the shadow on the back wall of the set ourselves or cover the noisy camera, but that's not how the game is played. Instead, we have to convince, cajole, coerce, plead and use every other psychological persuasion technique to get the other crafts to help us prevent sound problems.

That last second, scrambling time on set should only be used to fix the unexpected problems which will inevitably occur. Instead, that last second is the first time that the sound mixer finds out about changes in dialog, staging or unwanted noises from on or off of the set.

All of the other departments work for what is seen and not heard. Every single person on the production from make up and wardrobe to grips and props concentrates only on what's seen in the viewfinder.

Because the other production crafts work only for picture, no one knows or cares what's happening to YOUR audio.

You are the only person on set with the power to allow us to get you good sound. It is always tempting for sound to give in and not go against the grain when circumstances impose impossible barriers.

Film schools are going to need to add psychology courses to their sound mixing curriculum soon. The situation is often that bad. That is why we want you to know as much as possible about the audio minefield lurking on every set.

What may often seem to you to be a lot of complaining, is in fact simply communicating negative factors to you, so that you will know what you are getting on your sound tracks, and what sound problems can be fixed NOW. For bottom line, these are YOUR choices. Just because we hear a noise does not make it a sound problem. It is your problem too. After all, we turn over the tracks to you at the end of the day.

After reading this, hopefully it will be much easier for you to make the informed decision about when it's really the time to loop. It's far too late to reverse a sound calamity later in post.

Even though this topic is last in the chain of events, we should start first by talking about why [ADR](#) is not a fix.

LOOPING

It is important to understand the gravity and consequences caused when the words "We'll loop it" are used.

You are obviously aware that extra [ADR](#) adds a financial burden to your budget, but the consequences are much greater than that. Looping is only an answer for situations where all else fails! It's not a quick fix later if the original set problems could have easily have been rectified with just a little time, knowledge or communication. Looping means that you are also making a huge artistic compromise that damages the film in many other ways in which you may not be so aware.

Obviously, you realize that the actor's performance is always better in production than in an ADR booth. Making a film is an artistic endeavor that lives forever! You cast great actors to bring together the collaborative efforts of film making and then you lose the essence of the scene by looping! The voice of a great actor totally in character, moving and interacting with other actors in three dimensional space is a treasure. It breathes life into the film.

Sure, ADR will have less noise than even the best set recording made with cameras rolling, but in fact we know it lacks any spontaneity, as well as the emotional truth of what's captured when you use your artists talents on the set. It can't be duplicated. ADR is not acting. The greatest method actors all hate it and at best, it is only a close recreation of the original scene.

Looping also just eats into a post budget's financial and time constraints, which would be far better spent utilizing their magical tools to enrich the film.

When you just have to loop, the new forward thinking by many respected post sound professionals (such as [Randy Thom](#) from Skywalker) is to loop it immediately on or close to the set and as soon possible after the scene. These advocates know that the performance will be better so soon after filming the scene and the sound will be more natural if done in the same environment with the offending noises locked down. There are companies that specialize in on set looping using the video assist tapes for picture in portable studios.

Looping at best is usually fiscally irresponsible. Be sure that the audio problem really can't be fixed BEFORE you make a decision that you will regret later. Never allow the simple impatience of the moment on set be your real reason to loop! Be sure you have first covered all reasonable alternatives.

SOUND PROBLEMS ON THE SET

The majority of events that ruin sound tracks are totally predictable and happen over and over, show after show, year after year.

These are obstacles that are clearly identifiable and quantifiable. The difference between getting good sound or bad sound is often determined by how many of these predictable negative factors take place on your particular show and how they are handled.

There are few problems that don't have solutions if proper diligence can be taken in advance. The sound mixer is your advocate here. Let's try to identify the audio problems which each craft brings to your film.

PREPRODUCTION

Good sound begins by anticipating the outcome well in advance. Communicate early and often with your mixer in pre-production. Pay the mixer to go listen to potential problem sets ahead of time. Let them make a mock recording to see what can be dialed out in post. Do this before the locations are locked in and before the scouts with your key department heads. If the mixer is still on another show, have them designate a trusted associate to go for them. In the end, it's cost effective.

LOCATIONS DEPARTMENT

More can be done here to save a film's audio than any other department. Picking sets should have consideration for sound. At least try to weigh in environmental noise factors! We just ask that a minimal amount of consideration be given to potential audio problems. Often, we shoot in a place which could have easily been substituted for another location or on a weekend. Many times we film at a location which has construction, traffic, schools, airplane patterns and other background noise which are quite obvious. Only shoot those kinds of locations when it's absolutely necessary and essential to the film.

Lock down all the noise problems before we get to the set.

- Always consider the control of the air conditioning. This is a must! Without a/c control, the audio background will change from shot to shot as the air goes on and off. If it is a large building, have someone standing by with a walkie-talkie to turn the air back on after each shot. When exterior, it can be just as important to kill a/c units that are near the set.
- Have control on all noise makers in sets such as bars, offices and hospitals. All refrigerators, computers, ice makers, x-ray and other machines must be able to be turned off.
- Ask to schedule filming during non- work times in locations such as bars and restaurants.
- Avoid tin roofs during rainy season.
- Make sure sets can be cabled by electric and still keep windows, doors and openings closed.

ART DEPARTMENT

- Confer with the sound department when adding noisy set furniture, computers and machinery.
- Try to consider overhead mics before building low covered ceilings, hanging lamps and cross beams.
- Inject foam into constructed stairs and steps to get rid of hollow footsteps over dialog.
- Whenever possible, carpet sets to deaden echo and live rooms. Especially consider these taking this step in rooms where the majority of dialog takes place.

ASSISTANT DIRECTORS

None of these implementation plans will succeed if the ADs don't support YOUR sound on the film. Sometimes they don't! The crew will take their cue to stop co-operating if it's clear the ADs react at the expense of getting good sound. Derogatory statements like "waiting on sound" and "just loop it" are unproductive and sap our spirit.

- Get police traffic lock downs when possible.
- Get quiet lock ups on set. Do not allow any walking. Station your PA's at key locations outside, and most especially under windows. (Keep the PA's from talking too) "Lock It Up" means that we should not hear any work noise from our crews. No engines, talking, etc. Have your walkie set up with priority override function so as to announce the roll across all walkie-talkie channels being used by all departments.

- Allow the sound department to make quick corrections that are reasonable.
- Enforce pantomiming from the background extras.
- Allocate a reasonable time and place for an actor to get wired. It won't help go faster if you push the sound crew to wire faster if the actor insists on getting wired at the last second on the set. Conversely, don't make the boom operator sit outside a star's dressing room just wasting valuable time that could be used to work out other sound problems on set.
- When there are closed rehearsals, make sure the boom operator gets to see at least one rehearsal before the actors leave the set.
- Honor wild line requests before releasing the actors.
- Honor room tone requests before breaking the set up, and stop all talk and movement. Room tones are very important to get before the ambient sound changes.
- In plane infested locations, roll as soon as the engine noise tails out before another plane comes in. Keep the set quiet enough to determine the status of the incoming and outgoing planes.
- Be sure to inform Sound Department at least two days ahead of playback days. Have the office send a post approved tape with sync. Don't expect that a CD or cassette will suffice.
- Have all walkie-talkies, cell phones and pagers turned off during takes and final rehearsals. They can wreck havoc on wireless microphones.

PRODUCTION MANAGERS

- Budget in a third sound person and the proper amount of audio equipment. A third person is invaluable in getting sound problems fixed in the crucial moments between the takes and scenes.
- Don't say "no" to any additional sound related costs without considering the entire post budget too.
- Book and check that stages are quiet. Even the newest and most modern stages often have dimmer banks located on or so close to the stage that they are a terrible problem.

CAMERA DEPARTMENT

Camera assistants:

- When (not if) there is camera noise, make all reasonable efforts to contain it by using barneys, glass, blankets, tweaking, etc.
- Don't turn the slate on and off as time code will then be wrong. Let the mixer know as soon as a slate shows any problems.
- Let the sound mixer know what frequencies are being transmitted in case it steps on wireless mics or comteks. Be prepared to kill the panatape when it causes microphone interference.

Operators:

- Hold only the frame size to be used and no more.
- Communicate and work out any problems with the boom operator before the first team is called in.
- Be willing to operate in a pinch with cover or blanket over a particular noisy camera.

Directors of Photography:

- Light the set so that a boom can swing overhead.
- Don't use Xenon lights unless the director was informed ahead of time that the whole scene will have to be looped.
- Don't ever say "loop it"! It's not the DP's prerogative! If the DP conveys to the crew that sound matters to the film, they will follow that lead and be more attentive to potential sound problems.
- When shooting practical car scenes, try to consider sound problems and light so that windows can be closed where possible.

SPECIAL EFFECTS DEPARTMENT

Make a reasonable effort to keep the offstage noise making devices away from the set and baffled whenever there is dialogue in the same scene.

- When making rain, put the rain machines and water truck as far away as possible.
- Use hogs hair to muffle raindrops on roofs and when it's seen out a window.
- When a fan is used to blow a curtain or plant, work it out with the sound mixer before the noise problem crops up after the first take.
- When using fireplaces, try to limit the hissing gas sound.
- Heaters close by on cold sets need to be shut off well before rolling to eliminate the crackle and pops from shutdown.

WARDROBE DEPARTMENT

They can help in creatively placing the wireless in the best possible position on the actor's body, when asked. They should never make negative comments about bulges that make the actors overly conscious about wearing a body mic on them. Think about avoiding noisy clothing, especially when the principal actors will wear much of the same clothing throughout the film.

- Never allow the actors to wear silk underclothes, especially bras. Cotton tank top T-shirts should be put on actors when possible to help avoid clothes rustle.
- Silk ties should be avoided or at least modify the inside with cotton for primary actors wearing the same wardrobe in several scenes.
- Be sound conscious when choosing chains, necklaces and other jewelry.

PROPS DEPARTMENT

Make an effort to keep noise making props as quiet as possible. Especially in the following most common problem areas:

- With guns, always let the mixer know if it's full, 1/2 or 1/4 loads, and how many shots plan to be fired and when.
- With table scenes, try to put down a pad or felt underneath the tablecloth to muffle dish-clattering noise.
- Use fake ice cubes in drink glasses.
- In kitchen scenes, put a cloth down where possible dish noise will occur. Spray shopping bags with water mister to get rid of paper noise.

GRIP DEPARTMENT

- Use cutters to kill boom shadows.
- Use all reasonable measures to reduce dolly squeaks. Put a dance floor down if floors creak. Use talcum powder when needed.
- Use blankets to deaden outside sound from open doors and windows.
- Make baffle covers for the loud set machines, fans and ballasts.
- Fasten down scrims that rattle in the wind.
- On insert cars keep extra stands attached to speed rails from clanging.

ELECTRIC DEPARTMENT

- Keep the generator as far away as is reasonably possible. Always use a minimum of 3 banded lengths (150 feet) to the first box, and go back from there. Supply base camp power where possible to avoid loud generators.
- Use all reasonable measures to keep lights and ballasts from making any noise on set, and use extension cabling to keep noisemakers off set.
- Run cables so that windows and doors can close.
- Put variacs on problem dimmers.
- On insert cars, clip and wedge funnels to keep down the rattling sound.

CRAFT SERVICE DEPARTMENT

Set up away from sets so that the coffee makers and other devices can't be heard, especially on stage.

TRANSPORTATION DEPARTMENT

- Plan on pushing or pulling a particularly loud vehicle out of the scene using human manpower when it's possible during close-up shots.
- Park the trucks as far away from set as reasonably possible and keep the individual generators off during the shot. Put base camp at least 1000 feet from set in quiet locations such as deserts and mountains, and 500 feet away in city locations.
- Help keep insert cars quiet.
- Be prepared to park a truck in front of the generator.
- Instead of running car engines, use alternate quiet power for picture vehicles that must run flashing light effects during the coverage.

- Reward the companies who have taken reasonable steps to keep quiet driving to a maximum. Especially ask if the tail pipe has been rerouted to the front of the truck and if the on board gennie is quiet.
- Use only one key alone in the ignition to eliminate clanging keys.
- Don't Armor-All the dashboard, and use Simple Green to remove it where mics need to be planted.
- Keep car interior floor area free of all the noisemakers such as the chains, removed side mirrors, nuts and bolts.

ACTORS

To mixers, a good actor is a loud actor. Whenever we get together to discuss our jobs we always talk about how good a voice an actor has. Actors who have done a lot of stage work tend to have learned the art of projecting their voice.

- Don't refuse to wear a wireless mic when it is necessary.
- Don't ask a boom operator to get out of their eye line. (Acting has been done with the boom for decades. This is a dangerous precedent we have recently started seeing.)
- Warn the sound department when you will do a much louder or quieter take than was rehearsed.
- Please speak louder when asked. We only ask when we really need it.

DIRECTORS

Collaborate frequently with your sound mixer as you would an editor, composer, DP or writer. We can also enrich your "vision" through sound images. Find out what problems and solutions exist. Don't fall for the trap where you hate to see your mixer coming because you know it's just bad news. Your mixer will feel that vibe and start telling you less and less until sound is no longer a vital part of collaboration on your film.

A good rapport with your mixer will allow you to know information about what was borderline and what you can barely get away with. If you simply trust that the mixer is getting good sound, you may be mistaken. It is always possible that the mixer has given up fighting the good sound battle and succumbed to the lack of any positive response to their efforts.

Very often, sound problems are not discovered until the last moment after the other departments have done their work and the set is finally quiet enough to hear through the microphones. The shot sometimes evolves into a sound problem that was unanticipated. Also, we may need a moment or two to make adjustments when creative changes have been made on the spot. Like it or not, sound is a part of your entire film making process from pre-production through production and on to post production. You might as well do it right. If you convey this message to your troops ahead of time, you will be freed up to spend more quality time with other pressing areas of film making.

Remember that certain crew departments such as the UPM and ADs are compelled to watch their production budget, and are not always concerned about the entire cost of a film all the way through post production.

The difference between good sound and bad sound on many shows is only about 5 to 10 minutes a day of doing some added tweaking here, another mic planted, a wireless changed there, quieting footsteps, siliconging a door squeak, room tone, a well placed blanket, killing a machine that came on during a take, powder on a dolly wheel etc. Usually by the time you print a take, the problems have been solved. If not, another take may be in order. ADs or other crafts who stifle this process will cost you dearly later in post.

- **OVERLAPS** - When possible, it's always better not to have them at all unless absolutely necessary because you can only be in one cut or the other. You may decide later you want to see both sides of the actor's dialogue. Remember, it's always easy to create an off camera overlap later if you still want it. Usually, the overlaps are simply because of a belief that the performance will be hindered. That argument loses credibility when the face of one of the overlapping performers won't be able to be seen at all. Of course there are times that overlaps must happen and both sides must be miked.
- **USING TWO CAMERAS** - There is a proper way to use 2 or more cameras and an improper way. It is perfectly acceptable to use 2 cameras of the same approximate frame size at the same time. The sound mixer's nightmare is running one camera wide and another tight at the same time. This means that sound will be compromised because all the actors must be wired because the wide camera will not allow a mic to get close enough to the tight camera size. This can be resolved by the second camera only filming non-speaking actors, or not working at all during the wide master shot. Then, go to 2 cameras for all your coverage.
- **REHEARSALS** - These are very important to the whole crew. It's fine to have closed rehearsals for actors only, but give one to the crew or at least let the boom operator see one. Otherwise, we can only guess where and how the sound will be delivered. The words we dread the most are "let's shoot the rehearsal". You might get lucky, but don't shoot rehearsals unless you are willing to do a lot more sound takes to work out the unknown problems.
- **AD LIBBING** - It's impossible to mic lines no one knows will happen. If you want to keep an ad-lib, do another take for sound if they didn't get the line the first time.
- **AIR TRAFFIC** - Probably the single most frustrating audio problem on set is being in a plane traffic pattern. It's a problem that might have been avoided by better location scouting. You know it's no good, we know it, the actors know it, the whole crew knows it's no good. Yet, after awhile, you have no choice but to plow through and start printing those takes anyway. In that case, rather than looping, it's much better to get through the scene with lots of short clean pieces that can be cut together later.
- **LOUDER ACTORS** - Sometimes we really need you to get the actors to speak up in order to save a scene. When in loud scenes such as a crowded bar or stock exchange, it's best to force the actors to speak unnaturally loud. If not your added post sound will be thin and they won't be able to add the rich background effects that make it sound real.

FINAL NOTES

The key at all times with sound is the word "reasonable". Reasonable efforts should always be made to do all these things in a reasonable amount of time. We don't want to take over the set and make the film, it's just about getting good sound. Nor do we want to sit quietly in a corner while YOUR sound tracks are butchered.

We are only asking that we go back to a time not too long ago where this was all common practice. We won't debate why this happened, but there is no question that an anti-sound attitude now prevails. That was then, and this is now. Being a set politician is always an important forte, but your tracks should not be forced to ride on the outcome of those verbal altercations.

Don't tell your sound mixer that you hate looping unless you are willing to back them up with your on set support.

Today, it is up to you to demand better sound for YOUR picture. This can be easily instilled on the first day of pre-production. Give all the keys a memo and a verbal direction that you want every reasonable effort made to get good sound on YOUR film.

We are not asking for power on set, just a little respect for your sound. With your newfound support, we promise to act reasonably at all times and not expect that the sound be the most important part of the film. We know there will be times that sound must be looped after it was given due consideration. We just don't want it taken lightly either. The word "reasonable" applies at all times.

Most importantly, find the time to communicate with your sound mixer because you need to know if you are getting the best sound tracks possible.

We have written this because we want your film to be great! It will live forever and we always want to be proud that our name went on your film.

Sincerely,
Your Sound Department