To All Film And Video Makers
An Open Letter From Your Sound Department

This letter was written by audio professionals to help directors and producers understand how good sound can be recorded on the set. It was edited by me to help make certain points more clearly. We share a common bond to help you make the best film possible. Some sound people who have contributed to and read this letter feel as though its tone is too pleading or complaining. That was not the intent at all. Please don't take it that way, we only want to help.

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

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 even sure just what it is that we do. Only the most obviously bad noises are 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 JUST 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, solving these problems should always be a cooperative effort with the assistant directors and other crafts, some of whom create these problems for us.

A mixer on a tough show, who fights alone as a black sheep trying to get you good sound, stands a good chance of burning out from all the excuses and defenses put up by others.The temptation is to cave into the pressure and just go with the flow. No good can come from this.

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 production.

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

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

THEN AND NOW 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 that 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 there were many times that an operator quickly put blankets and pillows over themselves and a really 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 and non-union independent films proliferated. Along the way, the process of learning what their jobs entailed changed the way they perceived production 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. Newcomers to the technical crafts now learn on the job under fire through a kind of osmosis process.

Those same crafts must now be requested in each instance to do reasonable things necessary to protect YOUR sound tracks because they just don't consider it to be a part of their job any more.

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 too often the first time that the sound mixer finds out about changes in dialog, staging, or discovers 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 grip and props concentrates only on what's seen in the viewfinder. Because of the tunnel vision of the other production crafts who 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.

Just because we hear a noise does not only make it our problem. It is your problem too! After all, we turn over the tracks to you at the end of the day. After reading this, we hope it will be easier for you to make an informed decision about when it's really the time to loop a scene. 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 consider the gravity and dramatic consequences caused when the words "We'll loop it" are uttered. 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 just a quick fix later if the original on-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 that you may not be aware of.

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 their collaborative efforts in the film making of your film. Don't 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. Re-creating a performance while

sitting in a sterile booth, in front of a big microphone, matching your lips for a scene shot months before is a less than ideal way to act.

Sure, ADR will have less noise than even the best production recording, but it lacks any spontaneity and the emotional truth of what's captured when you use your artists' talents on the set. That can't be duplicated.

When you must loop, the new forward thinking by many respected post sound professionals (such as Randy Thom from Skywalker Sound) is to loop it immediately, on or close to the set, and as soon possible after the scene is shot. These advocates know that the performance will be better and the sound will be more natural if it's done right after filming the scene, in the same environment (with the offending noises locked down).

There are companies that specialize in on-set looping which use 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 to 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 the mixer make a mock recording to see what noises can be removed in post, just as the DP does with camera tests. 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 the mixer 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.

Set selection should consider 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 obvious background noises. Only shoot in 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 filming in exterior locations, it can be just as important to kill a/c units that are near the set.

Have control of all noise makers in locations like bars, offices and hospitals. All refrigerators,

computers, ice makers, x-ray and other machines must be able to be turned off. Try to schedule filming during non-work times in locations such as bars and restaurants. Avoid tin roofs during rainy season. Make sure the electric department can cable the set and still keep the windows, doors and openings closed.

ART DEPARTMENT

1. Confer with the sound department when adding noisy set furniture, computers and machinery. 2. Try to consider overhead mics before building low covered ceilings, hanging lamps and cross beams. 3. Inject foam into constructed stairs and steps to get rid of hollow footsteps over dialog. 4. Whenever possible, carpet the sets to deaden echo and live rooms. Especially consider 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.

1. Get police traffic lock downs when possible.

2. Get quiet lock ups on set. Do not allow any walking or talking. 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.

3. Allow the sound department to make quick corrections that are reasonable.

4. Enforce silent pantomiming from the background extras.

5. Allocate a reasonable time and place for an actor to get wired. It won't help you go quicker if you push the sound crew to wire faster when the actor insists on getting wired at the last second on the set. Conversely, don't make a sound person sit outside a star's dressing room just wasting valuable time that could be used to work out other sound problems on set.

6. When there are closed rehearsals, make sure the boom operator gets to see at least one rehearsal before the actors leave the set.

7. Honor wild line and wallah requests before releasing the actors and extras.

8. Honor room tone requests before breaking the set up, and stop all talk and movement. Room tones are very important to do immediately, before the ambient sound changes.

9. In plane-infested locations, roll as soon as the engine noise tails out before another plane comes in and the window of opportunity is lost. Keep the set quiet enough to determine the status of the incoming and outgoing planes.

10. Be sure to inform the 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.

11. Have all walkie-talkies, cell phones and pagers turned off during takes and final rehearsals. They can wreak havoc on wireless microphones.

12. Every time there is a new set-up, announce out loud what kind of shot will happen and the direction we are looking. It is a common mistake to keep the crew in the dark, and it only causes chaos from setting up in the wrong area.

PRODUCTION MANAGERS

1. Budget in a third sound person and the proper amount of audio equipment. A third person provides invaluable support so that the other two can keep rehearsing or shooting. The impact is penny-wise. Time saved on set at the moment when every department is ready to shoot are dollars well spent.

An additional mic can be added in a jiffy without stopping production to show someone else the right place to stand and how and where to hold a second mic and still stay out of the shot but close enough to sound good.

Would you ask a PA to load a second camera? Lots of other problems can be solved more quickly, from killing an errant fan to fixing a director's headset on the fly. In a pinch, the third person can keep production shooting in the event of a sudden emergency or sickness befalling a sound person.

2. Consider the post budget too, when making financial decisions on production.

3. 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.

4. When you must call a warehouse a stage, please sound proof it so we can record clean sound.

CAMERA DEPARTMENT

CAMERA ASSISTANTS

1. When (not if) there is camera noise, make all reasonable efforts to contain it by using barneys, glass, blankets, tweaking, etc.

2. 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.

3. Let the sound mixer know what frequencies are being transmitted in case a frequency steps on wireless mics or comteks. Be prepared to kill the Panatape when it causes microphone interference.

OPERATORS

1. Hold only the frame size to be used and no more.

2. Communicate and work out any problems with the boom operator before the first team is called in.

3. Be willing to operate in a pinch with a cover or blanket over a particularly noisy camera.

DIRECTORS OF PHOTOGRAPHY

1. There is no almost never a good reason to light a boom operator off of the set. An overhead mic in capable hands should be able to dodge your lights if there was a little collaboration working out the boom shadows during the lighting process. It is important to give the boom operator the space above the frame as the sound is never as good with wireless as it is with an open boom mic.

2. Don't use Xenon lights unless the director was informed ahead of time that the whole scene will have to be looped.

3. 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.

4. When shooting practical car scenes, try to consider sound problems. Try to 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. 1. When making rain, put the rain machines and water truck as far away as possible.

2. Use hogs hair to muffle raindrops on roofs and under windows.

3. 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.

4. When using fireplaces, try to limit the hissing gas sound.

5. Heaters on cold sets need to be shut off well before rolling to eliminate the crackle and pops from shutdown.

WARDROBE DEPARTMENT

Cotton is our friend. Silk is our enemy. When requested, the wardrobe department can help by creatively placing the wireless in the best possible position on the actor's body. They should be sensitive about making negative comments about bulges that make the actors overly self-conscious about wearing a body mic. Avoid noisy clothing, especially when the principal actors will wear much of the same clothing throughout much the film.

1. Ask the actors to avoid silk underclothing. Cotton tank top T-shirts should be put on actors when possible to help avoid clothes rustle.

2. Silk ties should be avoided. At least modify the inside with cotton for primary actors wearing the same wardrobe in several scenes.

3. Consider the impact on sound when choosing chains, necklaces and other jewelry.

PROPS DEPARTMENT

Make an effort to keep noisy props as quiet as possible, especially in the following common problem areas:

1. With guns, always let the mixer know if you are using full, 1/2 or 1/4 loads, how many shots plan to be fired, and when they will take place.

2. With table scenes, try to put down a pad or felt underneath the tablecloth to muffle dish-clattering noise.

3. Use fake ice cubes in drink glasses.

4. In kitchen scenes, put a cloth down where possible dish noise will occur. Spray shopping bags with a water mister to get rid of paper noise.

GRIP DEPARTMENT

1. Use cutters to kill boom shadows.

2. Use all reasonable measures to reduce dolly squeaks. Put a dance floor down if floors creak. Use talcum powder when needed.

3. Use blankets to deaden outside sound from open doors and windows.

4. Make baffle covers for the loud set machines, fans and ballasts.

5. Fasten down all scrims and gels that rattle in the wind.

6. On insert cars, keep extra stands attached to speed rails from clanging.

ELECTRIC DEPARTMENT

1. 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.

2. Use all reasonable measures to keep lights and ballasts from making any noise on set, and use extension cabling to keep noisemakers off set.

3. Run cables so that windows and doors can close.

4. Put variacs on problem dimmers.

5. On insert cars, clip and wedge funnels to reduce the rattling sound.

6. Keep lights in silent (non flicker free) when shooting at 24 fps to get rid of the unnecessary high pitched whine.

CRAFT SERVICE DEPARTMENT

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

TRANSPORTATION DEPARTMENT AND OTHERS

1. When possible, plan to push or pull the particularly loud vehicle out of the scene with human power during the close-ups.

2. 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.

3. Help keep insert cars quiet.

4. Be prepared to park a truck in front of the generator.

5. Instead of running car engines, use alternate quiet power for picture vehicles that must run flashing light effects during the coverage.

6. Never allow an open stage process car to be used without informing production that the scene will be looped.

7. 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.

8. Use only one key alone in the ignition to eliminate clanging keys.

9. Don't Armor-All the dashboard, and use Simple Green to remove it where mics need to be planted.

10. 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 of a voice an actor has. Actors who have done a lot of stage work tend to have learned the art of projecting their voice.

1. Don't refuse to wear a wireless mic when it is necessary.

2. 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.)

3. Warn the sound department when you will do a much louder or quieter take than was rehearsed.

4. Please project 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.

Many sound problems cannot even be heard until the last moment after the other departments have done their work and the set is finally quiet for a rehearsal. Just as for the camera, the shot sometimes evolves into a problem that was unanticipated. Also, we may need a moment or two to make adjustments when creative changes have been made on the spot.

Sound is a part of your entire film making process from pre-production through post production. It needs to be done right the first time. 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 the priorities of UPM and ADs compel them to focus their attention on the production budget. They are not always as concerned about the other costs of a film 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, siliconing 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, do another take to be safe.

ADs or other crafts who stifle this process will cost you dearly later in post.

1. **OVERLAPS** - When possible, it's always better not to have overlaps at all during singles unless absolutely necessary because you can only be in one cut or the other and it will cause terrible editing problems.

You may decide later you want to see both sides of the actor's dialogue and you won't be able to do that. It's always easy to create an off camera overlap later when you want it. Usually, the overlaps on set come from a belief that the performance will be hindered without them. That argument loses credibility because you are then forced to not even see the face of one of the overlapping performers. You can only pick one or the other actor to see when there is an overlap! Of course there are times that overlaps must happen for other reasons, and both sides must then be miked.

2. **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 by losing 'perspective'. All the actors must then be wired because the wide camera will not allow a mic to get close enough to the tight camera size. That means that a sweet sounding overhead mic may be replaced by an inferior sounding lavalier mic. 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.

3. **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 your sound will suffer and you will do extra takes as unknown problems surface.

4. **AD LIBBING** - Again, it's impossible to mic lines that 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.

5. **AIR TRAFFIC** - Probably the single most frustrating audio problem on set is being in a plane traffic pattern. It's a problem that can be avoided. You know it's no good, the actors know it, the whole crew knows the sound is 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.

6. **LOUDER ACTORS** - Sometimes we really need you to get the actors to project in order to save a scene. We really need extra volume when we ask for it. Also, in loud scenes (such as a crowded bar or stock exchange) it's best to make the actors to speak unnaturally loud. If not, your post background sound will be thin and your editors won't be able to add the rich background effects to create reality.

7. **MOS & Q-TRACKS** - Always roll on all takes. There is a misconception that recording sound on non-dialogue scenes slows you down. That's really not the case. It is best to record sound all of the time because it will make looping much easier when you have a sync reference track to work with.

Do not talk over fx shots with no dialogue (such as car drive-bys) because the scene will then have to be foleyed. Please keep quiet during all scenes in order to keep rich sound tracks from being destroyed for no good reason.

8. **Locations** - Impress upon them that it is important to you to have quiet locations picked out to show you. When you must use a sound unfriendly location, think about having a good reason to incorporate the offending background noise into your movie. If a highway or factory is next to it, perhaps you can establish it's proximity in order to justify some of the noise.

FINAL NOTES The words, "We'll fix it in post", should be replaced by "Let's fix it on the set". Reasonable efforts should always be made to do all of these things in a reasonable amount of time.It bothers us to sit quietly in a corner while YOUR sound tracks are being butchered. We care about our work.

We are only asking that we go back to a recent time when this was all common practice. We won't debate why this happened, but there is no denying 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 who has the best verbal sparring abilities.

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 of the department 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 special powers on set, just a little respect for your sound. With your support, we promise to act reasonably at all times and not expect that the sound will 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. The word "reasonable" applies at all times.

Most importantly, find the time to communicate with your sound mixer. You need to know that you are getting the best sound tracks possible. We have written this because we like working on films and we want your film to be great! Our job may be finished at the end of principal photography, but we always want to be proud that our name went on your great film. Sincerely, Your Sound Department

One of the many obstacles we face as sound people is that sound (especially on the set) is too often perceived by Directors and Producers as a "problem." It's rarely "Wow, what incredible things can we do with this scene if we use sound in a special way?" More often it's "Oh no, the sound guys are complaining again." "Waiting for sound again." Etc.

When we talk about ADR for instance, rather than emphasizing the extra expense of ADR, I would focus on the fact that actors' performances are almost always better in production than they are in adr. The sound of a great actor, totally in character, moving and interacting with other actors in three dimensional space is a treasure. It breathes life into a scene. ADR will probably have less noise than even the best recording made with cameras rolling, but it usually lacks the spontaneity, as well as the emotional and acoustical truth of what happens on the set.

Rehearsals, Your sound team (or at least a representive of) needs to witness a Rehearsal. You can hand a boom op and a mixer a set of sides and show them some marks an the ground ,and you might as well blindfold 'em and spin em round. We need to hear props they are handling,shoes they are wearing,wardrobe,reflections,their actions,and where they deliver their lines. Without a proper rehearsal it's a waste of your time.