Tony Schwartz records
The Sound of Children

Children and God
Nancy Grows Up
Sound Snapshots
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Recording Techniques
Notes by Tony Schwartz

Children can be an endless source of material for the creative recordist. If you believe that children should be heard as well as seen, you'll find constant pleasure in recording and playing back the uninhibited and ingeniously amusing remarks of youngsters.

Few people seem to use the tape recorder in the way that is most rewarding: to record the sounds of persons or situations that particularly interest them. Surprisingly, most purchasers of battery-operated recorders use these versatile machines only as a copying device for sounds from radio, TV, or phonograph records. These lightweight, portable units have a much greater potential, since they can record the sounds of life anywhere without being tethered to a wall outlet by a power cord. When used to capture the sounds of actuality, they can create family albums of sound that will be treasured for generations.

An interesting thing about sound is that it can capture not only the externals (as film is able to) but it enables you to portray the thoughts and inner feelings of people. For instance, on a child's first day at school you could take pictures to record the appearance of the situation, but with tape you can record the thoughts and feelings of the child and parents. Perhaps that is why family tapes recorded years ago still retain their interest.

HOW TO BUY A RECORDER

If you want to tape the sound of children, you should have a battery-powered recorder that can be carried comfortably. Until recently, no self-powered recorder priced under $200 was capable of making tapes comparable in quality to those produced on the average plug-in machine in the $100 range. Now, however, cordless recorders are available that can perform as well as a moderately priced a.c. unit.

To get maximum value for the price you pay, check these points before buying a battery-operated recorder:

- Tape speed should be 7-1/2 i.p.s.
- The recorder's weight should be under 12 lb. for ease of carrying.
- Batteries should be readily available; if a recharging device is used, it should operate on the current available where you travel.
- The machine should be free of wow and flutter when it records a sustained piano, guitar, or clarinet note.

Another important factor is accessibility of controls. Can the machine be operated with its case closed or through open flaps or holes in the carrying case? If not, the unit probably wasn't designed for use in motion. Try wiggling the machine a little while you are recording. Then decide whether there is excessive variation in speed on playback. This, too, could be an indication that the machine was not intended to be used in motion.

MAINTENANCE PROCEDURES

It is extremely important to check the batteries frequently. Unless they are in good condition, the recorder will not operate reliably. Before each taping session, test the batteries; most recorders have a meter for this purpose (it's usually combined with the recording-level meter).

Periodic maintenance of your recorder will help you get the best results from it. The tape head should be cleaned occasionally because oxide flake-off accumulates in the head gaps. When the deposit builds up, reduced volume and loss of high frequencies result. To clean the recorder head, use a cotton-tipped swab that has been lightly moistened with head-cleaner...
fluid. When you apply the swab, make certain that it doesn't touch the felt pressure pads. The fluid quickly dissolves the cement that holds the pads to their supports.

The tape guide and capstan drive also should be cleaned regularly. Use a swab with rubbing alcohol to clean the rubber capstan pressure puck. Don't let carbon tetrachloride touch any rubber parts, since it will harden and crack them.

Read your recorder's instruction manual carefully for maintenance instructions. Usually it is not necessary to oil the mechanism, but if the manual specifically recommends this procedure, apply the oil with a single-drop oiler and make sure there is no spillage.

TIPS ON TAPE

Most tape made by the major manufacturers is of fine quality, but it is advisable to stick to one brand so that you can pinpoint other problems that may come up. Avoid buying off-brand or bargain tape in white or blank boxes. These tapes may turn out to be rejects or seconds from major manufacturers. Some of the problems you can have with bad tape are: bad coating, bad base, bad adhesion of coating to base, uneven tape widths, and stretched tapes. These factors can affect the recorder-head wear, frequency response, intermittent fall-off of high frequencies, and permanence of recording.

The most a good tape can do is to give you the quality inherent in your recorder. "High-fidelity" tape can not provide fidelity that exceeds your recorder's capability. The higher the speed at which the tape is run, the better the fidelity. The thinner tapes, indicated by terms such as "long-play," "double-play," "plus 50," etc., enable you to run the same length of tape at the faster speeds and obtain more recording time per reel than can be had with standard-play tapes. In addition to higher fidelity, another advantage of running the tape at 7-1/2 inches per second rather than at 3-3/4 i.p.s. is that less flutter and wow are noticeable on sustained tones of musical instruments.

Hiss is a problem that is encountered with certain recorders and tapes. To minimize it, sound should be recorded at as high a level as possible. Many recorders are equipped with a recording-level (VU) meter; if yours has this feature, adjust the volume control so that the needle consistently swings to the upper limit while you are recording. In this way, you put a strong signal on the tape. Later, if you re-record, reducing the volume will also reduce the hiss.

Incidentally, when using "long-play" tapes, it is better to record at a slightly lower level. The thinner base increases the danger of print-through of one layer to the next one on the reel.

Acetate tape is fine for all recording work. Mylar tape, which costs a little more, makes recordings of about the same quality but has the great advantage of being less affected by poor storage conditions.

Don't stint on using tape when you make recordings of children. There might be only a few portions of an entire reel that are worth preserving—but these moments may be priceless. You can either remove these segments by editing them from the tape, or re-record them with a second recorder. In either case, of course, the remainder of the reel of tape can be reused again and again.

Remember to use only one side of the tape when you record. Using both sides makes it difficult to locate a particular portion of a recording. Furthermore, if you edit tape that has been recorded in two directions, one of the tracks will be ruined when the tape is cut and spliced. So for tapes you're going to work with, make it a practice to record on only one track.

MICROPHONES

The sound quality produced by a recorder often can be improved if you use a better microphone than the one supplied with the recorder. When testing a number of mikes, try each with the recorder and the same reel of tape. Hold each mike about 10 inches from your mouth and speak a line like: "This is a test of Microphone A!" to begin each recording. This simple method tells more about each microphone than recording several discs of music. It's amazing how much difference you can discern in mikes with this voice test alone.

It's very helpful to use a windscreens on the mike indoors (if you need to reduce the sound of breath wind) as well as outdoors (to minimize the sound of natural wind). At low frequency, these cause a "whuuu" sound or speaker popping. If you don't have a windsreen, get a 1/4-inch thickness of the material that looks like foam rubber and comes in packing cases. Wrap it around your mike; you'll find that it is quite effective.

Most recorders are supplied with an omnidirectional microphone, which picks up sound coming from all directions. Its lack of selectivity makes it suitable for use when you want to record the entire sound environment—which may include street noises, a passing jet plane, or a ringing telephone. In noisy places, such as a bus terminal or a county fair, the omnidirectional mike is not a good choice if you wish to record voices without extraneous sound.

Picking up sound coming from only one direction requires a directional mike. This minimizes extraneous sounds and enables voices to be recorded with clear definition.

Hold the microphone less than a foot from the lips of the person speaking. If it is much further away, it will be necessary to increase the gain (recording volume) excessively. This could spoil the quality of the recording.

THE ENVIRONMENT OF SOUND

Sound is affected by its environment. Recording sound can capture the feeling of various environments and as the sound takes on the local color, it is as "live" or "dead" as the place in which it's recorded.

The distance between the mike and the subject also affects what we hear. As this distance changes, so can the quality and clarity of the sound.

So when you record the sound of children's voices, keep in mind the acoustical qualities of your surroundings. If you're in a hallway, for example, there's likely to be a lot of sound bouncing around (reverberation). You have to get closer to your subject or use a directional mike—and the closer the mike is to your subject, the clearer the recording.

In this situation, the result is popularly referred to as "live sound."

If you were in an open field, however, there would be little bouncing around of sound. You could
record with a mike 40 feet from the subject and get sound clear as a bell (that is, if the wind were not blowing and the birds were silent). This is a situation that produces what is commonly called "dead sound".

When recording children, their voices are the most important element, so the best way to pick up clean sound in a noisy environment (such as a subway) is to move close to the subject and use a directional microphone. If the sounds of the environment are significant, use a non-directional mike.

Remember that the sound around speech is also important. Sounds in a real situation can add meaning, just as the way something is said can add meaning to the words. For example, if you are making a recording, just as the way something is said can add meaning to the words. For example, if you are making a recording in a playground, the sounds of other children will provide additional interest.

**RECORDING METHODS**

The best approach with children, as well as with adults, is to be honest with them. If you try to identify with and understand them, you'll get better results than if you consider them merely performers for your microphone. For example, to study an aspect of children's lives—say, their invisible playmates—it's necessary to get honestly involved with the children. You could then record them speaking about playing with these friends. Another facet of the study would be the reactions of people who know the children.

To find out a youngster's thoughts about an action or situation, it may sometimes be helpful to ask a question like: "How do you feel about it?" Or, if you've been getting nothing but "yes", "no", or other one-word answers, don't hesitate to ask, "Why?" or "How come?"

Sometimes if you're questioning an adult and the answer to a question is expressed poorly, you can have him repeat the response by saying, "I couldn't hear that; can you say it again?" If you want to cut out your own voice later in editing, have the subject repeat the essence of your question in his answers.

**ESSAYS IN SOUND**

When compiling an essay in sound, consisting of a number of recordings that may have been made at different times and places, check these points:

- Sections of sound should run no longer than is necessary to convey an idea.
- Adjust the balance of the recording levels when re-recording sections of tapes.
- Consider the use of various editing techniques; fading sound in and out, laying one sound over another, overlaying narration on the beginning and end of sounds, and the dramatic cutting and juxtaposition of sounds.
- Pay particular attention to the recording quality.
- Any segment of sound that you use should be complete; don't let your listeners feel that you have cut off something in the middle of a significant statement or feeling. (This applies to sound, words, or music).
- Before presenting material for others to listen to, ask yourself whether this material would be clear if you were listening to it for the first time.
- Test your tapes on others to see whether their interest is sustained. If it isn't, you should do a sharper editing job—or tape some new material.

**EXPERIMENTS TO TRY**

- A baby's crying. If you listen closely, you'll notice that a baby cries a certain way when it's hungry and another way when it's tired. In fact, it has a different cry for many situations. Record a number of crying spells and you'll be surprised at how much they differ from one another.
- A project that can occupy you for years: make a series of recordings of a baby cooing, crying, laughing, trying to talk and finally pronouncing recognizable words.
- Make tapes of people who come in contact with your child—relatives, friends, doctor, teachers, etc. From their comments will come the background for a portrait in sound of your youngster.
- Do a series of recordings of your child at mealt ime, bedtime, or bathtime and tape not only the child's voice but those of his mother and father.
- Record a birthday party—the preparations for it, the arrival of guests, the games that are played, and the remarks of the children as they leave.
- Ask a number of children such questions as: "What is your best friend and why do you like him?"; "What are you going to be when you grow up—and why?"; "Who is your best friend and why do you like him?"; "What do (or don't) you like about school?"; "What are you going to be when you grow up—and why?"
- When you go on vacation, tape the youngsters' reactions to the sights they are seeing for the first time.
- Have the recorder ready at home in the evening when a child describes what he has learned in school.
- Children's games, whether indoors or in playgrounds, provide a wealth of interesting sounds. Tape children's songs, too.
- If the child has prepared a recitation, or has a part in a school play, make a tape of it—then record the child's reaction to the playback.
- Be on the alert for special situations, such as a ride on a carousel or a sports event, where the background sounds supplement the interest in the child's comments.
- Keep a sound diary of a child's activities by having him describe the most interesting things that happen to him each day.

You may have to do considerable editing on projects like these, but presenting only the most significant parts of the recordings will make the tapes much more effective.

If you're working on an essay in sound, don't try to rush it to completion. Recording projects, like children, need understanding, work, time, and love to grow to maturity.