

Observations on Demonstration Techniques

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At home or in the showroom, audio equipment must be demonstrated properly if its capabilities are to be appreciated by the listener—whether a potential buyer or merely the owner of the system.

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AS THE MARKET for high-quality audio equipment has expanded to include millions of music lovers whose interest in the science of sound is strictly non-technical, there has become increasingly apparent the need for improvement in demonstration technique.

Only a few short years ago, the average buyer of high-fidelity equipment was so engineeringish in character that he was perfectly satisfied to select an amplifier simply on the strength of its ability to cover a wide frequency range. Frequently, an entire demonstration set-up consisted of nothing more nor less than an audio oscillator, the amplifier in question, and a VU (pardon, it was *db* in those days) meter. On the strength of the meter's gyrations, the amplifier found a happy home or prolonged its stay on the dealer's shelf—without uttering a single sound.

Those who bought audio equipment in the ways we speak of cared very little about music in an esthetic sense. So far as they were concerned, music was but a necessary evil to be endured as a concession to friends and neighbors who refused to share their enthusiasm for curves and characteristics, also to the local fire department which found no amusement in the siren-like goings-on of an oscillator feeding a lot of watts into a batch of speakers.

Speaking in a literal sense, them days is gone forever. Figuratively, though, their influence remains, as is evidenced by the antiquated demonstration techniques which still prevail in the showrooms of many less-advanced dealers and jobbers. Also not entirely guiltless of retarding the enthusiasm of audio's newly found apostles are thousands of hi-fi bugs who evaluate a music system purely on the strength of how high and how low it will go and, more importantly, how loud it will play. This brings us to the cardinal sin of most demonstrations.

Don't Play the System Too Loud

There is no question about extended frequency response and low distortion being the prime requisites of any good music system, but both qualities are nullified if the gain control is cranked up to the extent that there is discomfort on the part of the listener. Naturally, this level will vary with the individual, and as a consequence no hard and set rule can be established—however there are a few points which can be accepted as a fairly safe guide.

First, forget all you have read about duplicating the full volume of a symphony orchestra in an average living room. Practically speaking, it can't be done—and even if you could do it you wouldn't like it. Remember, in a concert hall there is sufficient cubic volume to permit dissipation of the tremendous sound energy generated by a full symphony orchestra and, if the hall is correct acoustically, there is a pleasing ratio of direct to reflected sound which is quite apparent on well-made recordings.

To achieve identical reproduction of a symphony orchestra by electrical means, your living room would have to be as large as the auditorium in which the live performance transpired—and the walls would have to afford complete absorption in order to avoid the effect of the room's own acoustical qualities. Naturally, such idealized conditions are beyond the realm of probability.

Where small groups—such as string quartets, or soloists—are concerned, you may well attempt to duplicate the full level of the live performance. Such combinations sound best when they are heard in fairly intimate surroundings—small public dining rooms, for example—many of which approximate in size an average sound demonstration room. Here the fact that the physical dimensions of the two rooms are nearly the same—both being ideally suited for listening to a small chamber group—in-

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icates that the sound level of the electrical reproduction may well equal that of the live performance with enjoyable results.

When music is heard through a high-quality audio system, it is most pleasant when it is reproduced at a level which delivers to the listener's ears the same magnitude of sound pressure that he would receive at the original live performance. This is not to say that the *actual sound level* of the original performance must be duplicated—but that the *effect* of the performance can be recreated if the sound output of the music system is adjusted in keeping with physical surroundings.

To the best of the writer's knowledge, there has been no complete research covering this entire question. Personal experience, however, indicates that the relationship which exists between the sound level of a live performance and that of the reproduction should closely approximate the relationship which exists between the cubic volume of the hall in which the live performance occurred and that of the room in which the reproduction takes place.

One thing is certain beyond all doubt—when music is reproduced under circumstances which do not permit the same degree of sound energy dissipation, relatively speaking, as that which prevailed at the original performance, there will be lacking the very quality of naturalness you are striving to attain.

Don't Be Afraid to Use Tone Controls

It has long been a mystery to me why there is such reluctance on the part of audio hobbyists and sound equipment demonstrators alike to make use of tone controls. The controls on a modern high-quality amplifier are precision devices in every respect—designed to compensate for the frequency deficiencies of incoming broadcast signals or recordings. Yet, from the way these useful little devices are shunned by many demonstrators, you'd think their only function was to mask shortcomings of the amplifier itself.

Recordings—even those of the same manufacturer—vary in quality all over the lot. Even though careful control is maintained over every technical operation, pick-up conditions differ, to say nothing of the likes and dislikes of various conductors and recording engineers. A good case in point is the *London Montovani* record which is enjoying such popularity at present.

Audio characteristics of broadcast stations, too, seem to vary more in keeping with personalities than with technicalities. In the New York area there are at least a dozen FM stations on the air, each of which could be recognized by its audio quality, even though its call letters were never mentioned.

In the face of all this, it is difficult to understand the audio fan or demonstrator who mentions a dozen times per minute that his amplifier is reproducing

everything from d.c. to r.f. flat within zero db, yet is apparently oblivious to the fact that the resultant sound could stand a good shot of chlorophyll—when all he has to do to correct the situation is touch a tone control.


In most modern input signals—whether from a pickup or a tuner—the weakness lies in linearity, caused by the individualities of recordings and broadcast stations. In other words, the wanted frequencies are in the signal all right, but not in the proper proportion to meet *your* listening desires. Well-designed tone controls are capable of compensating for even the most pronounced case of too much or too little bass or treble—of making the incoming signal meet *your* standard of what the music should sound like, which is not necessarily that of the broadcast or recording engineer.

Only through the use of tone controls can you be certain of achieving the response that suits you, irrespective of input signal quality. If you are a music lover, make liberal use of your tone controls to add to the enjoyment of your music system. If you are a demon-

strator, use them to clinch your sales; remember, the person entering your sound studio for the first time is there to find out for himself if high-quality audio will give him the same fine music he has heard in the homes of friends. The answer is to let him hear music as he likes to hear it—and generous use of tone controls provides the means.

* * *

The points mentioned are paramount among those which govern the success or the undoing of any demonstration of a home music system, and they are those which are most frequently abused. There are many other items which bear heavily on this subject, and which may be covered in subsequent approaches—such as choice of program material, avoidance of worn or scratched records, etc. The big thing to remember is that thousands of newcomers who are approaching the audio field for the first time are interested in music and music alone. The method of its achievement is entirely incidental. All you have to do is play a record and make it sound the way it *should*—and you've sold a bill of goods.



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