Music Preparation for Commercial Release

31.1 INTRODUCTION

In this chapter we will deal with the problems of taking previously recorded archival program segments from various sources and compiling them for commercial release. Such matters as relative transfer level, signal processing, and even identification of the earliest sources will be discussed. The CD, with its performance characteristics that far outclass the stereo LP record, has brought new expectations to the record reissue market, and consumers routinely expect the best transfers possible.

31.2 SOURCE IDENTIFICATION

In compiling programs for reissue, the engineer often will have to work with material that is quite old, perhaps three decades or more. When dealing with record companies who archive their material under vault conditions, the original tapes are usually easy to find and identify. However, where recorded material has over the years been sublicensed or sold, such identification may not be easy. More often than not, the original tapes were transferred, and the copies exchanged in the licensing procedure.

Older tape formulations were not stable, and many older recordings have been ruined by progressive delamination of oxide from the base material. In such cases, the only working copy of the recording may be one or two generations removed from the master.

On other occasions, the old tape will be playable, perhaps for only a few minutes at a time, due to the build-up of oxide on the reproduce head, with consequent “squealing” of the tape as it passes over the head in violin bow fashion. There are some remedial steps which may be taken here (5).

The following points should be noted:
Fig. 31-I. Correction curves for playing IEC tapes with NAB equalization. Equalization as shown in curve A should be added when transferring IEC 38 cm/sec tapes, and as shown in curve B when transferring IEC 19 cm/sec tapes.

1. Examine the tape carefully, noting the quality of the wind. If it is smooth, then it is likely that the tape is wound tail out. It should not be rewound quickly, because this may cause damage if the tape has any tendency to stick to itself, layer to layer. Place the tape reel on the feed side of the machine and rewind it by playing it at the slowest tape speed. (The tape lifters may be engaged so that there will be no unnecessary head wear.) Stand over the tape during this process and be prepared to stop the machine on a moment's notice if anything appears amiss.

   This is also a good time to check the quality of splices. Anything questionable here should be redone using fresh splicing tape. Some engineers use a slight amount of talcum powder to dry a sticky splice; this is not recommended since the powder and adhesive will eventually collect on the heads and cause other problems.

2. Check the tape equalization carefully. Most 19- and 38-cm/sec (7.5 and 15 inch/sec) tape recordings made in the United States will require NAB equalization. The occasional rare 76-cm/sec (30 inch/sec) tape will, if made before the middle 1970s, be of indeterminate equalization, requiring fine tuning by ear.

   Every attempt should be made to correct for the various IEC (European) playback equalization curves by having switchable playback electronics for the purpose. If this cannot be done, the correction curves shown in Figure 31-I can be used as a broad guideline for making transfers.

3. Check track configuration and azimuth carefully. Many older tapes made before modern standards were promulgated have odd track configurations that will result in noise and level differences between channels if played back on modern machines. The exact track configuration can be observed by treating the oxide surface with a small amount of carbonyl iron solution. This liquid has very fine particles of iron in solution and can be painted over a small portion of the tape. The iron particles will align themselves with the part of the tape that has passed over the record head. Remove the solution when the determination has been made. If the tape appears to be far out of standard, a decision may have to be made regarding height adjustment of the playback head.