

RECOMMENDATION ITU-R BR.1422

**OPERATIONAL PRACTICES FOR TELEVISION USE OF FILM SOUNDTRACKS
ENCODED WITH NOISE REDUCTION AND MATRIX SURROUND**

(Question ITU-R 218/10)

(1999)

The ITU Radiocommunication Assembly,

considering

- a) that a large and growing number of 35 mm feature films are produced in multichannel sound;
- b) that a large number of the multichannel feature films are identified as Dolby Stereo or Dolby Stereo SR, and that films identified as Dolby Stereo utilize Dolby A-type noise reduction (companding), and films identified as Dolby Stereo SR use Dolby SR-type noise reduction;
- c) that Dolby Stereo and Dolby Stereo SR systems use the photographic analogue stereo tracks of 35 mm films;
- d) that films marked Dolby Stereo are compatible with expanders of the older Dolby A noise reduction systems;
- e) that films marked Dolby Stereo SR are compatible with the more recent Dolby SR noise reduction systems;
- f) that films using the Dolby Stereo SR yield lower noise in reproduction;
- g) that the stereo audio source can exist either in its original magnetic format or as a photographic analogue stereo track on 35 mm film;
- h) that a large number of broadcasters are transmitting or planning to transmit these feature films to television viewers;
- j) that a large number of home television viewers are equipped to reproduce Dolby multichannel sound in their homes;
- k) that a larger existing base of viewers are still equipped with mono and stereo reproduction equipment, which will be receiving multichannel sound;
- l) that new multichannel sound transmission must be compatible with the existing mono and stereo equipment;
- m) that production of multichannel sound requires correct technological procedures before transmission;
- n) that Recommendation ITU-R BR.1287 gives some general guidance on the use of multichannel film soundtracks in broadcasting;
- o) that the European Broadcasting Union (EBU) Technical Recommendation R59-1999 gives some general guidance on the use of multichannel film soundtracks in broadcasting,

recommends

- 1** that whenever possible, a stereo magnetic master or magnetic soundtrack should be used for sound reproduction. In the case where only the optical soundtrack copy is available, such a copy should be cleaned before transfer;
- 2** that as a principle, the reproduction of a stereo photographic soundtrack from a negative film should be avoided because of higher distortion and noise level. Such a track should always be converted into a positive form;
- 3** that a stereo optical track should always be reproduced using a stereo optical pickup. If only a mono signal is required, it should be derived as a downmix from the two channel stereo signal after the two channels have been individually decoded with the appropriate noise reduction system;

- 4 that the equipment for reproduction or expansion used corresponds to the type of noise reduction used to produce the film. If two versions of a film are available, it is advisable to always select the copy that yields the lowest noise;
- 5 that older noise reduction reproduction systems could play back films produced with lower noise yielding systems, the reverse should not be practised;
- 6 that since television reception does not allow as high a dynamic range as the cinema, if any correction of dynamic range is necessary, it should be done after noise reduction expansion and applied simultaneously on both encoded channels.
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