



Star Wars: Episode I was the first of a number of films using an additional rear channel routed to the array of speakers along the back wall of a cinema. In the cinemas, this back channel is not a discrete channel, but is matrixed into the left and right surround channels, much as the center front channel was matrixed into the left and right front channels in earlier matrix optical surround formats. This matrixed back channel is embedded in the soundtrack printmaster, so finds its way into all cinema digital sound formats. DTS uses the name "ES" on its cinema decoder; others call the process "Surround EX". Either set of letters stands for "Extended Surround".

When the film soundtrack is transferred to DVD, the matrixed back channel again automatically appears in the 5.1-channel soundtracks on the disc. However, DTS, with its greater bandwidth, is able also to offer a fully discrete back channel which can be recovered by a new generation of decoders. Such soundtracks are fully compatible with existing 5.1-channel DTS decoders; on a 5.1 setup, the back channel information would be heard in and between the left and right surround speakers. Thus "ES" is the general term for DTS tracks with a back channel, and "ES 6.1 discrete" is the particular case where the back channel is discrete.

To summarize about DTS-ES for the home:

- ✓ The back channel is always matrixed into the LS and RS channels.
- ✓ A discrete back channel can optionally be encoded as well.
- ✓ A DTS-ES 6.1-discrete decoder will play the discrete back channel. It will also subtract the discrete back channel out of the matrixed LS and RS channels, restoring the LS and RS channels as independent.
- ✓ Any DTS-ES track, discrete or not, is fully compatible with 6.1-matrix decoders because the matrixed tracks are always present.
- ✓ Any DTS-ES track is fully compatible with 5.1 decoders because the back channel information is matrixed into the LS and RS channels and will thus be heard in and between the LS and RS speakers.