Documentation for the ESS AudioDrive chips

In 2.4 kernels the SoundBlaster driver not only tries to detect an ESS chip, it tries to detect the type of ESS chip too. The correct detection of the chip doesn't always succeed however, so unless you use the kernel isapnp facilities (and you chip is pnp capable) the default behaviour is 2.0 behaviour which means: only detect ES688 and ES1688.

All ESS chips now have a recording level setting. This is a need-to-have for people who want to use their ESS for recording sound.

Every chip that's detected as a later-than-es1688 chip has a 6 bits logarithmic master volume control.

Every chip that's detected as a ES1887 now has Full Duplex support. Made a little testprogram that shows that is works, haven't seen a real program that needs this however.

For ESS chips an additional parameter "esstype" can be specified. This controls the (auto) detection of the ESS chips. It can have 3 kinds of values:

```
-1   Act like 2.0 kernels: only detect ES688 or ES1688.
0        Try to auto-detect the chip (may fail for ES1688)
688  The chip will be treated as  ES688
1688  ,,  ,,   ,,  ,,    ,,   ,, ES1688
1868  ,,  ,,   ,,  ,,    ,,   ,, ES1868
1869  ,,  ,,   ,,  ,,    ,,   ,, ES1869
1788  ,,  ,,   ,,  ,,    ,,   ,, ES1788
1887  ,,  ,,   ,,  ,,    ,,   ,, ES1887
1888  ,,  ,,   ,,  ,,    ,,   ,, ES1888
```

Because Full Duplex is supported for ES1887 you can specify a second DMA channel by specifying module parameter dma16. It can be one of: 0, 1, 3 or 5.