Claims:

1. A method for processing a multichannel sound in a multichannel sound system, in which the input signals L and R are decoded as stereo signals, and in which decoding includes generating at least two signals of the form nL-mR with n, m=1, 2, 3, 4 from the signals R and L.

2. The method according to claim 1, wherein decoding includes generating a spatial signal R and a center signal from the signals L and R, wherein a spatial signal R_L is formed from the difference of the signals L and R and/or a spatial signal R_R from the difference of the signals R and L.

3. The method according to claim 1, wherein a surround signal S_L is formed from the difference S_L=2L-R and a surround signal S_R from the difference S_R=2R-L.

4. The method according to claim 2, wherein an encoding provides signals L_P, R_P in the form $L_P=C+R_L+S_L=(L+R)+(L-R)+(2L-R)=4L-R$ and $R_P=C+R_R+S_R=(L+R)+(R-L)+(2R-L)=4R-L$.

5. The method according to claim 3, wherein the signals R_L, R_R, C, S_L and S_R contain a level weighting V_C, V_R, V_S, wherein an encoding provides signals L_P, R_P in the form

   $L_P=V_CC+V_RR_L+V_SS_L=V_C(L+R)+V_R(L-R)+V_S(2L-R)$ and
   $R_P=V_CC+V_RR_R+V_SS_R=V_C(L+R)+V_R(R-L)+V_S(2R-L)$.

6. The method according to claim 3, wherein a frequency-dependent weighting of the signals S_L and S_R takes place.

7. The method according to claim 6, wherein the frequency-dependent weighting takes place by means of a height-shelving filter.

8. The method according to claim 4, wherein the signals L_P, R_P are filtered by means of an equalizer.

9. The method according to claim 4, wherein harmonic overtones are added to the signals L_P, R_P.

10. The method according to claim 9, wherein the addition of the harmonic overtones takes places by means of a maximizer or a non-linear characteristic line N_L.

11. The method according to claim 4, wherein the signals L and R are added to the signals L_P and R_P.

12. An audio system for performing the method according to claim 1, wherein the system comprises a signal processor.

13. A non-transitory software, which is imported onto a signal processor, wherein the software contains an algorithm, which is executed by the signal processor, wherein the algorithm includes the method according to claim 1.

14. A signal processor for performing the method according to claim 1.

15. The method according to claim 2, wherein a surround signal S_L is formed from the difference S_L=2L-R and a surround signal S_R from the difference S_R=2R-L.

16. The method according to claim 3, wherein an encoding provides signals L_P, R_P in the form
$L_P=C+R_L+S_L=(L+R)+(L-R)+(2L-R)=4L-R$ and
$R_P=C+R_R+S_R=(L+R)+(R-L)+(2R-L)=4R-L$.

17. The method according to claim 4, wherein the signals R_L, R_R, C, S_L and S_R contain a level weighting V_C, V_R, V_S, wherein an encoding provides signals L_P, R_P in the form
$L_P=V_CC+V_RR_L+V_SS_L=V_C(L+R)+V_R(L-R)+V_S(2L-R)$ and
$R_P=V_CC+V_RR_R+V_SS_R=V_C(L+R)+V_R(R-L)+V_S(2R-L)$.