

**CPC****COOPERATIVE PATENT CLASSIFICATION****H04S**

**STEREOPHONIC SYSTEMS** (information storage on discs or tapes [G11B](#);  
broadcast systems for the distribution of stereophonic information [H04H 20/88](#);  
multiplex systems in general [H04J](#))

**NOTE**

In this subclass, the following term is used with the meaning indicated:  
- "stereophonic systems" covers quadraphonic or similar systems

**H04S 1/00**

**Two-channel systems** ([H04S 5/00](#), [H04S 7/00](#) take precedence)

**H04S 1/002**

- {Non-adaptive circuits, e.g. manually adjustable or static, for enhancing the sound image or the spatial distribution (control circuits for electronic adaptation of the sound field [H04S 7/30](#))}

**H04S 1/005**

- .. {For headphones}

**H04S 1/007**

- {in which the audio signals are in digital form (data reduction aspects thereof based on psychoacoustics [G10L 19/02](#))}

**H04S 3/00**

**Systems employing more than two channels, e.g. quadraphonic** ([H04S 5/00](#),  
[H04S 7/00](#) take precedence)

**H04S 3/002**

- {Non-adaptive circuits, e.g. manually adjustable or static, for enhancing the sound image or the spatial distribution (control circuits for electronic adaptation of the sound field [H04S 7/30](#))}

**H04S 3/004**

- .. {For headphones}

**H04S 3/006**

- {in which a plurality of audio signals are transformed in a combination of audio signals and modulated signals, e.g. CD-4 systems (for broadcasting [H04H 20/88](#), [H04B 1/1646](#))}

**H04S 3/008**

- {in which the audio signals are in digital form, i.e. employing more than two discrete digital channels, e.g. Dolby Digital, Digital Theatre Systems (DTS) (data reduction aspects thereof based on psychoacoustics [G10L 19/02](#))}

**H04S 3/02**

- of the matrix type, i.e. in which input signals are combined algebraically, e.g. after having been phase shifted with respect to each other

**H04S 5/00**

**Pseudo-stereo systems, e.g. in which additional channel signals are derived from monophonic signals by means of phase shifting, time delay or reverberation** (arrangements for producing a reverberation or echo sound [G10K 15/08](#))

**H04S 5/005**

- {of the pseudo five- or more-channel type, e.g. virtual surround}

**H04S 5/02**

- of the pseudo four-channel type, e.g. in which rear channel signals are derived from two-channel stereo signals

**H04S 7/00**

**Indicating arrangements; Control arrangements, e.g. balance control**

**WARNING**

H04S 7/00  
(continued)

Groups [H04S 7/30](#) to [H04S 7/40](#) do not correspond to former or current IPC groups.

- H04S 7/30
  - . {Control circuits for electronic adaptation of the sound field (non-adaptive circuits, i.e. manually adjustable or static, for enhancing the sound image or the spatial distribution [H04S 1/002](#), [H04S 3/002](#))}
- H04S 7/301
  - .. {Automatic calibration of stereophonic sound system, e.g. with test microphone}
- H04S 7/302
  - .. {Electronic adaptation of stereophonic sound system to listener position or orientation ([H04S 7/301](#) takes precedence)}
- H04S 7/303
  - ... {Tracking of listener position or orientation}
- H04S 7/304
  - .... {For headphones}
- H04S 7/305
  - .. {Electronic adaptation of stereophonic audio signals to reverberation of the listening space ([H04S 7/301](#) takes precedence; arrangements for producing a reverberation or echo sound [G10K 15/08](#); for public address systems [H04R 27/00](#), [H04R 29/00](#))}
- H04S 7/306
  - ... {For headphones}
- H04S 7/307
  - .. {Frequency adjustment, e.g. tone control ([H04S 7/301](#) takes precedence; circuits for correcting the frequency response of transducers [H04R 3/04](#); tone control circuits in amplifiers per se [H03G 5/00](#))}
- H04S 7/308
  - .. {Electronic adaptation dependent on speaker or headphone connection}
- H04S 7/40
  - . {Visual indication of stereophonic sound image (visual indication of individual signal levels [H04R 29/008](#))}

#### **H04S 2400/00**

**Details of stereophonic systems covered by [H04S](#) but not provided for in its groups (not used, see subgroups)**

- H04S 2400/01
  - . Multi-channel, i.e. more than two input channels, sound reproduction with two speakers wherein the multi-channel information is substantially preserved
- H04S 2400/03
  - . Aspects of down-mixing multi-channel audio to configurations with lower numbers of playback channels, e.g. 7.1 -> 5.1 ([H04S 2400/01](#) takes precedence)
- H04S 2400/05
  - . Generation or adaptation of centre channel in multi-channel audio systems
- H04S 2400/07
  - . Generation or adaptation of the Low Frequency Effect [LFE] channel, e.g. distribution or signal processing
- H04S 2400/09
  - . Electronic reduction of distortion of stereophonic sound systems
- H04S 2400/11
  - . Positioning of individual sound objects, e.g. moving airplane, within a sound field ([H04S 2420/13](#) takes precedence)
- H04S 2400/13
  - . Aspects of volume control, not necessarily automatic, in stereophonic sound systems
- H04S 2400/15
  - . Aspects of sound capture and related signal processing for recording or reproduction

#### **H04S 2420/00**

**Techniques used stereophonic systems covered by [H04S](#) but not provided for in its groups (not used, see subgroups)**

- H04S 2420/01
  - . Enhancing the perception of the sound image or of the spatial distribution using head related transfer functions [HRTF's] or equivalents thereof, e.g. interaural time difference [ITD] or interaural level difference [ILD]
- H04S 2420/03
  - . Application of parametric coding in stereophonic audio systems
- H04S 2420/05
  - . Application of the precedence or Haas effect, i.e. the effect of first wavefront, in order to improve sound-source localisation
- H04S 2420/07
  - . Synergistic effects of band splitting and sub-band processing

H04S 2420/11

- . Application of ambisonics in stereophonic audio systems

H04S 2420/13

- . Application of wave-field synthesis in stereophonic audio systems