

# CPC COOPERATIVE PATENT CLASSIFICATION

## H ELECTRICITY

(NOTE omitted)

## H04 ELECTRIC COMMUNICATION TECHNIQUE

(NOTE omitted)

## H04S STEREPHONIC SYSTEMS

### NOTES

- In this subclass, the following term is used with the meaning indicated:
  - "stereophonic systems" covers quadrasonic or similar systems
- In this subclass, it is desirable to add the indexing codes of [H04S 2400/00](#) and [H04S 2420/00](#).

### WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

|             |   |                |   |
|-------------|---|----------------|---|
| <b>1/00</b> | <b>Two-channel systems</b> ( <a href="#">H04S 5/00</a> , <a href="#">H04S 7/00</a> take precedence)   | 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 <a href="#">H04S 1/002</a> , <a href="#">H04S 3/002</a> )}   |
| 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 <a href="#">H04S 7/30</a> )}                                 | 7/301          | • • {Automatic calibration of stereophonic sound system, e.g. with test microphone}   |
| 1/005       | • • {For headphones}  | 7/302          | • • {Electronic adaptation of stereophonic sound system to listener position or orientation ( <a href="#">H04S 7/301</a> takes precedence)}   |
| 1/007       | • {in which the audio signals are in digital form (data reduction aspects thereof based on psychoacoustics <a href="#">G10L 19/02</a> )}  | 7/303          | • • • {Tracking of listener position or orientation}  |
| <b>3/00</b> | <b>Systems employing more than two channels, e.g. quadrasonic</b> ( <a href="#">H04S 5/00</a> , <a href="#">H04S 7/00</a> take precedence)  | 7/304          | • • • • {For headphones}  |
| 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 <a href="#">H04S 7/30</a> )}                                 | 7/305          | • • {Electronic adaptation of stereophonic audio signals to reverberation of the listening space ( <a href="#">H04S 7/301</a> takes precedence; arrangements for producing a reverberation or echo sound <a href="#">G10K 15/08</a> ; for public address systems <a href="#">H04R 27/00</a> , <a href="#">H04R 29/00</a> )} |
| 3/004       | • • {For headphones}  | 7/306          | • • • {For headphones}  |
| 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 <a href="#">H04H 20/88</a> , <a href="#">H04B 1/1646</a> )}                                   | 7/307          | • • {Frequency adjustment, e.g. tone control ( <a href="#">H04S 7/301</a> takes precedence; circuits for correcting the frequency response of transducers <a href="#">H04R 3/04</a> ; tone control circuits in amplifiers <a href="#">per se</a> <a href="#">H03G 5/00</a> )}   |
| 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 <a href="#">G10L 19/02</a> )} | 7/308          | • • {Electronic adaptation dependent on speaker or headphone connection}  |
| 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   | 7/40           | • {Visual indication of stereophonic sound image (visual indication of individual signal levels <a href="#">H04R 29/008</a> )}  |
| <b>5/00</b> | <b>Pseudo-stereo systems, e.g. in which additional channel signals are derived from monophonic signals by means of phase shifting, time delay or reverberation</b>  | <b>2400/00</b> | <b>Details of stereophonic systems covered by <a href="#">H04S</a> but not provided for in its groups (not used, see subgroups)</b>   |
| 5/005       | • {of the pseudo five- or more-channel type, e.g. virtual surround}   | 2400/01        | • Multi-channel, i.e. more than two input channels, sound reproduction with two speakers wherein the multi-channel information is substantially preserved   |
| 5/02        | • of the pseudo four-channel type, e.g. in which rear channel signals are derived from two-channel stereo signals   | 2400/03        | • Aspects of down-mixing multi-channel audio to configurations with lower numbers of playback channels, e.g. 7.1 -> 5.1 ( <a href="#">H04S 2400/01</a> takes precedence)  |
| <b>7/00</b> | <b>Indicating arrangements; Control arrangements, e.g. balance control</b>  | 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
- 2400/09 . Electronic reduction of distortion of stereophonic sound systems
- 2400/11 . Positioning of individual sound objects, e.g. moving airplane, within a sound field ([H04S 2420/13 takes precedence](#))
- 2400/13 . Aspects of volume control, not necessarily automatic, in stereophonic sound systems
- 2400/15 . Aspects of sound capture and related signal processing for recording or reproduction
  
- 2420/00** **Techniques used stereophonic systems covered by [H04S](#) but not provided for in its groups (not used, see subgroups)**
- 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]
- 2420/03 . Application of parametric coding in stereophonic audio systems
- 2420/05 . Application of the precedence or Haas effect, i.e. the effect of first wavefront, in order to improve sound-source localisation
- 2420/07 . Synergistic effects of band splitting and sub-band processing
- 2420/11 . Application of ambisonics in stereophonic audio systems
- 2420/13 . Application of wave-field synthesis in stereophonic audio systems