# CPC COOPERATIVE PATENT CLASSIFICATION

## **H ELECTRICITY**

(NOTE omitted)

## H04 ELECTRIC COMMUNICATION TECHNIQUE

(NOTE omitted)

## H04S STEREOPHONIC SYSTEMS

#### **NOTES**

- 1. In this subclass, the following term is used with the meaning indicated:
  - "stereophonic systems" covers quadraphonic or similar systems
- 2. In this subclass, it is desirable to add the indexing codes of H04S 2400/00 and H04S 2420/00.

#### **WARNING**

e.g. balance control

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

1/00	<b>Two-channel systems</b> ( <u>H04S 5/00</u> , <u>H04S 7/00</u> take precedence)	7/30	• {Control circuits for electronic adaptation of the sound field}
1/002	{Non-adaptive circuits, e.g. manually adjustable or static, for enhancing the sound image or the	7/301	{Automatic calibration of stereophonic sound system, e.g. with test microphone}
	spatial distribution (control circuits for electronic adaptation of the sound field <u>H04S 7/30</u> )}	7/302	• • {Electronic adaptation of stereophonic sound system to listener position or orientation
1/005	• • {For headphones}		(H04S 7/301 takes precedence)
1/007	• {in which the audio signals are in digital form (data	7/303	• • • {Tracking of listener position or orientation}
	reduction aspects thereof based on psychoacoustics	7/304	• • • {For headphones}
	<u>G10L 19/02</u> )}	7/305	• • {Electronic adaptation of stereophonic audio
3/00	Systems employing more than two channels, e.g. quadraphonic (H04S 5/00, H04S 7/00 take		signals to reverberation of the listening space (H04S 7/301 takes precedence)}
	precedence)	7/306	• • {For headphones}
3/002	• {Non-adaptive circuits, e.g. manually adjustable	7/307	• • {Frequency adjustment, e.g. tone control (H04S 7/301 takes precedence)}
	or static, for enhancing the sound image or the spatial distribution (control circuits for electronic	7/308	• • {Electronic adaptation dependent on speaker or headphone connection}
3/004	<ul><li>adaptation of the sound field <u>H04S 7/30</u>)}</li><li>• {For headphones}</li></ul>	7/40	• {Visual indication of stereophonic sound image}
3/006	• (in which a plurality of audio signals are transformed in a combination of audio signals and	2400/00	Details of stereophonic systems covered by H04S
		,	but not provided for in its groups
2/000	modulated signals, e.g. CD-4 systems}	2400/01	• Multi-channel, i.e. more than two input channels,
3/008	• {in which the audio signals are in digital form, i.e. employing more than two discrete digital		sound reproduction with two speakers wherein the multi-channel information is substantially preserved
	channels (data reduction aspects thereof based on psychoacoustics <u>G10L 19/02</u> )}	2400/03	Aspects of down-mixing multi-channel audio to configurations with lower numbers of playback
3/02	• of the matrix type, i.e. in which input signals are combined algebraically, e.g. after having been phase		channels, e.g. 7.1 -> 5.1 ( <u>H04S 2400/01</u> takes precedence)
	shifted with respect to each other	2400/05	Generation or adaptation of centre channel in multi-
5/00	Pseudo-stereo systems, e.g. in which additional	2.00,00	channel audio systems
	channel signals are derived from monophonic	2400/07	Generation or adaptation of the Low Frequency
	signals by means of phase shifting, time delay or reverberation		Effect [LFE] channel, e.g. distribution or signal processing
5/005	• {of the pseudo five- or more-channel type, e.g. virtual surround}	2400/09	Electronic reduction of distortion of stereophonic sound systems
5/02	• of the pseudo four-channel type, e.g. in which rear channel signals are derived from two-channel stereo	2400/11	• Positioning of individual sound objects, e.g. moving airplane, within a sound field (H04S 2420/13 takes
	signals		precedence)
7/00	Indicating arrangements; Control arrangements, e.g. balance control	2400/13	Aspects of volume control, not necessarily automatic, in stereophonic sound systems

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## H04S

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
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

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