

Title (en)

Sub-harmonic generator and stereo expansion processor

Title (de)

Subharmonischer Erzeuger und Prozessor zur stereophonischen Erweiterung

Title (fr)

Générateur subharmonique et processeur pour augmentation d'effet stéréophonique

Publication

**EP 1308925 A1 20030507 (EN)**

Application

**EP 01309021 A 20011024**

Priority

EP 01309021 A 20011024

Abstract (en)

A sub-harmonic generator includes: an input filter (102) operable to receive an input signal containing frequencies from among a first range and to produce a first intermediate signal containing frequencies from among a second range; a signal divider circuit (105) operable to receive the first intermediate signal and to produce a square wave signal containing square wave signal components at fundamental frequencies from among a third range, the third range of frequencies being about one octave below the second range of frequencies; a wave-shaping circuit (114) operable to receive the square wave signal and to produce a second intermediate signal containing sinusoidal signal components from among frequencies corresponding to the respective fundamental frequencies of the square wave signal components; an RMS detector (124) operable to produce an RMS signal corresponding to an instantaneous amplitude of the first intermediate signal; and a voltage controlled amplifier (118) operable to amplify the second intermediate signal by an amount proportional to the RMS signal to produce a sub-harmonic signal. <IMAGE>

IPC 1-7

**G10H 1/02**; **G10H 1/12**

IPC 8 full level

**G10H 1/02** (2006.01); **G10H 1/12** (2006.01)

CPC (source: EP)

**G10H 1/02** (2013.01); **G10H 1/12** (2013.01)

Citation (search report)

- [A] US 5473108 A 19951205 - MATSUDA EIJI [JP], et al
- [A] US 4841572 A 19890620 - KLAYMAN ARNOLD I [US]
- [A] US 5369224 A 19941129 - MIYATA TOMOMI [JP]
- [A] US 4866774 A 19890912 - KLAYMAN ARNOLD I [US]

Designated contracting state (EPC)

DE FR GB IT

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