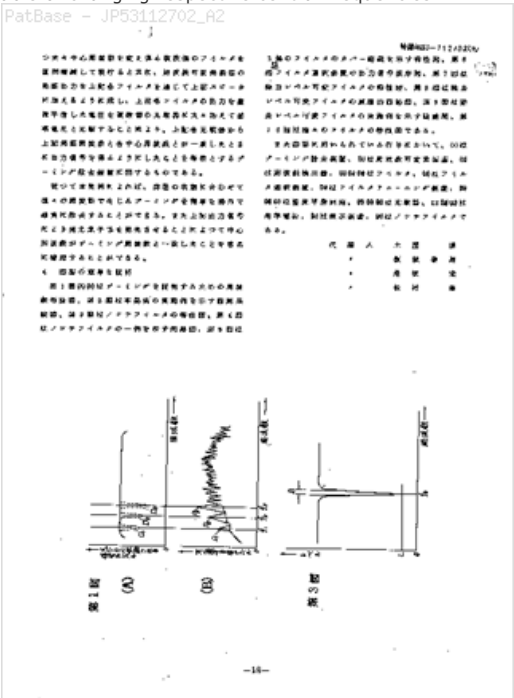


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Abstract: PURPOSE: To readily remove booming frequencies through simple operation by applying the outputs of a frequency variable oscillator to a speaker through a plurality of filters which are series connected to an acoustic reproduction system, have damping characteristics at mutually different frequency bands and are capable of changing respective central frequencies.

International (IPC 8-9): H03G5/02 H04R3/00 H04R3/02
H04R3/04 (Advanced/Invention);
H03G5/00 H04R3/00 H04R3/02 H04R3/04 (Core/Invention)
International (IPC 1-7): G10K11/00 H04R1/22 H04R3/00 H04R3/02
CPC: H04R3/04
European: H04R3/04
JP F-Term: 5D020 5D020/AC00 5D020/CC05 5D125 5D125/DD07
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5J030/AC09 5J030/AC11 5J030/AC16 5J030/AC23 5J030/AC26
5J030/AC28 5J030/AC29
JP F-Index: H03G5/02/B H03G5/02/025 H03G5/04 H04R3/00/310
H04R3/00/340 H04R3/02 H04R3/02/HAA
JP Facet: HAA



Publication number	Publication date	Application number	Application date
JP1281426 C3	19850913	JP19770027495	19770312
JP53112702 A2	19781002	JP19770027495	19770312
JP60001997 B4	19850118	JP19770027495	19770312

JP19770027495 19770312

Probable Assignee:	SONY CORP
Assignee(s): (std):	SONY CORP
Inventor(s): (std):	YAMAGUCHI OSAMU

Abstract: An apparatus may include a first headphone. The first headphone may include a first audio transducer and a second audio transducer. The first audio transducer may generate sound according to a first spectral mask and the second audio transducer may generate sound according to a second spectral mask. The first spectral mask and the second spectral mask may be adjustable at the first headphone. The first headphone may include a digital interface. The apparatus may further include a headphone controller to control the first headphone. The headphone controller may receive an audio signal from a portable electronic device and/or the headphone controller may transmit digital information representing speech, sound, or music to the

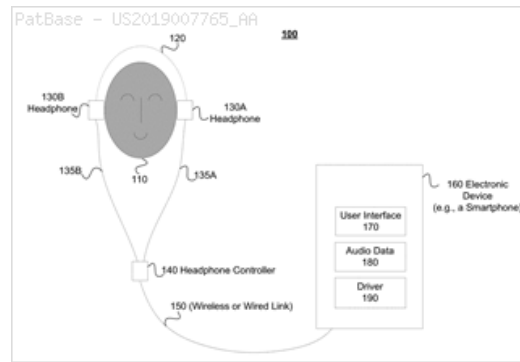
first headphone. In response to a user input, the headphone controller may cause an adjustment to one or more of the first spectral mask or the second spectral mask.

Classifications:

International (IPC 8-9): H04R1/10 H04R3/00 H04R3/04 H04R5/033 H04R5/04 H04S5/00 (Advanced/Invention)

CPC: H04R1/1041 H04R2420/07 H04R5/04 H04R5/033 H04R2201/105 H04R1/1083 H04R2201/107 H04R2420/09 H04R2460/07 H04R3/04 H04S5/00

US: 381/17



Family:

Publication number	Publication date	Application number	Application date
CN109076280 A	20181221	CN201880001085	20180626
US2019007765 AA	20190103	US20180024093	20180629
WO19001404 A1	20190103	WO2018CN092758	20180626

Priority:

US20170526998P 20170629 WO2018CN092758 20180626 US20180024093 20180629

Probable Assignee: SHENZHEN GOODIX TECH CO LTD

Assignee(s): (std): SHENZHEN GOODIX TECH CO LTD ; TOP TECHNOLOGY CO LTD SHENZHEN HUI

Assignee(s): SHENZHEN GOODIX TECHNOLOGY CO LTD ; SHENZHEN GOODIX TECHNOLOGY CO ; GOODIX TECHNOLOGY INC

Inventor(s): (std): PI BO ; HE YI

Agent(s): LONGSUN LEAD IP LTD

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

3) Family number: 59063032 (US2015110289A)

© PatBase

Title: SYSTEM AND METHOD FOR DIGITAL SIGNAL PROCESSING

Abstract: The present invention provides methods and systems for digital processing of an input audio signal. Specifically, the present invention includes a high pass filter configured to filter the input audio signal to create a high pass signal. A first filter module then filters the high pass signal to create a first filtered signal. A first compressor modulates the first filtered signal to create a modulated signal. A second filter module then filters the modulated signal to create a second filtered signal. The second filtered signal is processed by a first processing module. A band splitter splits the processed signal into low band, mid band, and high band signals. The low band and high band signals are modulated by respective compressors. A second processing module further processes the modulated low band, mid band, and modulated high band signals to create an output signal.

Classifications:

International (IPC 8-9): G06F3/16 G10L19/06 G10L19/26 G10L21/02 G11B G11B20/10 H03G3/00 H03G3/20 H03G5/00 H03G5/16 H03G7/00 H03G9/00 H03G9/02 H03M H03M1/72 H04B H04B3/21 H04R3/00 H04R3/04 H04S7/00 H3M1/72 (Advanced/Invention);

G06F16/60 G06F17/30 G10L21/034 H03G5/02 H03G7/00 H03G9/14 H04R3/04 (Advanced/Non-invention);

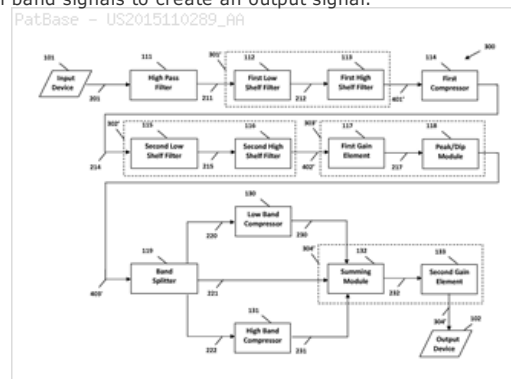
G11B (Subclass/Invention)

CPC: H03G3/002 H04R3/04 G10L21/02 G06F3/165 G10L21/034 H03G3/005 H03G5/025 H03G5/165 H03G9/005 H03G9/025 H03G9/14 H03G7/007 G06F16/60 H03G7/002 H04S7/307

US: 1/1 381/98

JP F-Term: 5D220 5D220/AB01 5J030 5J030/AA01 5J030/AB01 5J030/AC09 5J030/AC10 5J030/AC15

JP F-Index: H03G9/00/005 H03G9/02/025 H04R3/00/310



Family:

Publication number	Publication date	Application number	Application date
AU2014340178 AA	20150430	AU20140340178	20141022
BR112016008904 A2	20170801	BR20161108904	20141022
CA2928489 AA	20160421	CA20142928489	20141022
CN105830158 A	20160803	CN201480070127	20141022
EP3061091 A1	20160831	EP20140855210	20141022
EP3061091 A4	20170531	EP20140855210	20141022
HK1226192 A1	20170922	HK20160114618	20161222
IL245250 A0	20160630	IL20140245250	20141022
IN201627014341 A	20160819	IN201627014341	20160425

JP2017502541 T2	20170119	JP20160526032T	20141022
JP6426730 B2	20181121	JP20160526032T	20141022
KR20160074575 A	20160628	KR20167013022	20141022
NO20160775 A	20160509	NO20160000775	20160509
SG11201603173X A1	20160530	SG20161103173	20141022
US2015110289 AA	20150423	US20130059669	20131022
US2017078794 AA	20170316	US20160214146	20160719
US2018255396 AA	20180906	US20180906614	20180227
US9397629 BB	20160719	US20130059669	20131022
US9906858 BB	20180227	US20160214146	20160719
US10313791 BB	20190604	US20180906614	20180227
WO15061393 A1	20150430	WO2014US61684	20141022

Priority:

US20130059669 20131022 WO2014US61684 20141022 US20160214146 20160719
US20180906614 20180227

Probable Assignee: BONGIOVI ACOUSTICS LLC

Assignee(s): (std): BONGIOVI ACOUSTICS LLC ; BONGIOVI ANTHONY ; FULLER PHILIP ; FULLER PHILLIP ; ZELNIKER GLENN

Inventor(s): (std): BONGIOVI ANTHONY ; FULLER PHILLIP ; ZELNIKER GLENN ; FULLER PHILIP

Inventor(s): ANTHONY BONGIOVI ; PHILLIP FULLER ; GLENN ZELNIKER

Agent(s): GRIFFITH HACK; FETHERSTONHAUGH AND CO; KLANG ALEXANDER H; SHANGHAI INTELLECTUAL PROPERTY OFFICE; MALLOY AND MALLOY PL; MATOS PETER A ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

4) Family number: 4674032 (US4501015A)

© PatBase

Title: Apparatus for electroacoustic energy conversion

Abstract: The present invention relates to apparatus for electroacoustic energy conversion and particularly to a conversion apparatus comprising a channel for an electrical signal to be converted, said channel comprising in series connection signal processing circuitry for processing said electrical signal and having in sequence a power amplifier and an electroacoustic transducer, such as a loudspeaker. In accordance with the teachings of the present invention an electroacoustic energy converter apparatus is provided which introduces emphasis in a signal frequency range from 50 kHz up, preferably directly before delivering the signal to the power amplifier stage.

Classifications:

International (IPC 8-9): H03F3/183 H03G5/02 H03G5/04 H04R3/00
H04R3/04 (Advanced/Invention);
H04R25/00 (Advanced/Non-invention);
H03F3/181 H03G5/00 H04R3/00 H04R3/04 (Core/Invention);
H04R25/00 (Core/Non-invention)

International (IPC 1-7): H03F3/183 H03G5/04 H03G9/12 H04R3/00
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CPC: H03F3/183 H03G5/025 H03G5/04 H04R3/04 H04R25/50

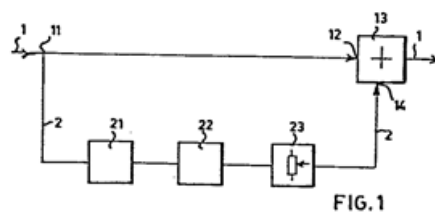
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US: 333/28T 381/103

JP F-Term: 5D020 5D020/AC00 5D220 5D220/AB03

JP F-Index: H04R3/00/310

PatBase - US4501015_A



Family:

Publication number	Publication date	Application number	Application date
AT10890 E	19850115	AT19820201040T	19820818
DE3261624 D1	19850131	DE19823261624	19820818
EP0074137 A1	19830316	EP19820201040	19820818
EP0074137 B1	19841219	EP19820201040	19820818
JP58069195 A2	19830425	JP19820152861	19820903
NL8104108 A	19830405	NL19810004108	19810904
US4501015 A	19850219	US19820410677	19820823

Priority:

NL19810004108 19810904 EP19820201040 19820818

Probable Assignee: DIJK JACOBUS CORNELIS VAN

Assignee(s): (std): DIJK JACOBUS C ; DIJK JACOBUS C VAN ; DIJK JACOBUS CORNELIS ; DIJK JACOBUS CORNELIS VAN ; MICHALOFSKI ERIK V ; ERIK VON MICHALOFSKI ; ERITSUKU FUON MIHAROFUSUKI ; YAKOBUSU KORUNERISU BAN DEIKU

Assignee(s): ERIK VON MICHALOFSKI TE DORDRECHT EN JACOBUS CORNELIS VAN DIJK TE ROTTERDAM ; VAN DIJK JACOBUS C ; VON MICHALOFSKI ERIK ; VAN DIJK JACOBUS CORNELIS

Inventor(s): (std): ERITSUKU FUON MIHAROFUSUKI ; VAN DIJK JACOBUS C ; VON MICHALOFSKI ERIK ; YAKOBUSU KORUNERISU BAN DEIKU

Inventor(s): VAN DIJK JACOBUS CORNELIS

Designated states: AT BE CH DE FR GB IT LI LU NL SE

Title: SIGNAL PROCESSING DEVICE AND SIGNAL PROCESSING METHOD

Abstract: A signal processing device includes a transformer simulator for simulating transfer characteristic of a transformer which changes in frequency characteristic depending on a load connected to the transformer and processing an input signal with the transfer characteristic to output the processed signal, and a load impedance simulator for simulating impedance characteristic of a predetermined load to output the impedance characteristic. The transformer simulator simulates the transfer characteristic of the transformer to which the load having the load impedance which is simulated by the load impedance simulator is connected.

Classifications:

International (IPC 8-9): G06F17/00 G06F17/50 G10H1/16 H03F1/00 H03G1/00 H03G5/02 H03G5/16 H04R3/00 H04R3/04 (Advanced/Invention); G06F17/00 (Core/Invention)

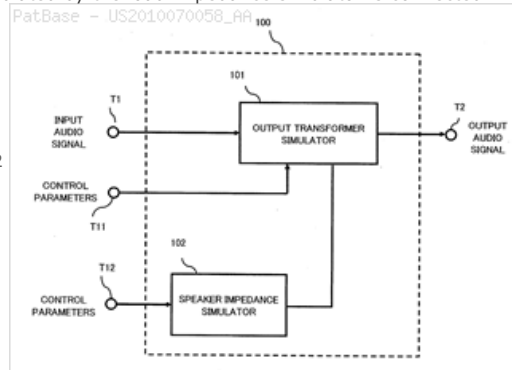
CPC: H03G5/02 H04R3/00 H03G1/00 H03G5/16

European: H03G1/00 H03G5/02 H03G5/16 H04R3/00

US: 323/355 381/61 700/94 700/94P 703/18 703/2 703/6

JP F-Term: 5D020 5D020/CE00 5D220 5D220/AB01 5D378 5D378/GG22 5D478 5D478/DB00 5J030 5J030/AA07 5J030/AA08 5J030/AB01 5J030/AC00 5J030/AC05 5J030/AC06 5J030/AC09 5J030/AC10 5J500 5J500/AA02 5J500/AC00 5J500/AF20 5J500/AH25 5J500/AH29 5J500/AH33 5J500/AH35 5J500/AH46 5J500/AK00 5J500/AK26 5J500/AK47 5J500/AK62 5J500/AM21 5J500/AS05 5J500/AT01 5J500/AT03

JP F-Index: G10H1/16 H03F1/00/Z H03G5/00/005 H03G5/02/Z H03G5/16/165 H04R3/04



Family:

Publication number	Publication date	Application number	Application date
GB200908607 A0	20090624	GB20090008607	20071119
GB2456963 A1	20090805	GB20090008607	20071119
GB2456963 B2	20110713	GB20090008607	20071119
JP2008062748 A1	20100304	JP20080545392T	20071119
JP5049292 B1	20121017	JP20080545392T	20071119
JP5049292 B2	20121017	JP20080545392T	20071119
US2010070058 AA	20100318	US20070515362	20071119
US8428917 BB	20130423	US20070515362	20071119
WO08062748 A1	20080529	WO2007JP72368	20071119

Priority:

JP20060312595 20061120 JP20080545392 20071119 WO2007JP72368 20071119

Probable Assignee: PANASONIC CORP

Assignee(s): (std): IWATA KAZUYA ; MATSUSHITA ELECTRIC IND CO LTD ; PANASONIC CORP

Assignee(s): MATSUSHITA ELECTRIC INDUSTRIAL CO ; MATSUSHITA ELECTRIC INDUSTRIAL CO LTD

Inventor(s): (std): IWATA KAZUYA

Inventor(s): KAZUYA IWATA

Agent(s): YAMADA TAKUJI; TANAKA MITSUO; KAWABATA JUNICHI; WENDEROTH LIND AND PONACK LLP; WENDEROTH LIND AND PONACK L L P; TANAKA MITSUO ET AL

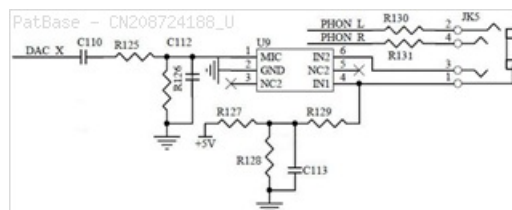
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: For a webcast link speaker signal conversion output circuit (Machine translation)

Abstract: Source: CN208724188U **Machine translation:** The utility model discloses a method for speaker webcast link signal conversion output circuit, including the headphone signal recognition circuit and the audio signal output circuit, wherein: The audio signal output circuit includes an output circuit DAC chip, left channel, right channel and left headphone output circuit interface; The headset includes a headphone signal recognition signal recognition circuit chip and a right headphone interface; The DAC chip at one end and the other end connected to the DSP chip via the left channel, right channel output circuit output circuit is connected to the left earphone right headphone interface interface connection; The right headphone interface is connected to the earphone signal identification chip connection. The utility model is adapted to OMTP and CTIA headset, to solve the two standard compatible headset distortion, crosstalk, microphone unusable, its audio signal output stability, not easy to produce noise.

Classifications:

International (IPC 8-9): H04R3/00 H04R3/04 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
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Priority:

CN201821318340U 20180816

Probable Assignee: GUANGDONG HUI JAY INTELLIGENT TECHNOLOGY CO LTD**Assignee(s):** GUANGDONG HUI JAY INTELLIGENT TECHNOLOGY CO LTD**7) Family number: 52114081** (US2012259626A)

© PatBase

Title: INTEGRATED PSYCHOACOUSTIC BASS ENHANCEMENT (PBE) FOR IMPROVED AUDIO

Abstract: Psychoacoustic Bass Enhancement (PBE) is integrated with one or more other audio processing techniques, such as active noise cancellation (ANC), and/or receive voice enhancement (RVE), leveraging each technique to achieve improved audio output. This approach can be advantageous for improving the performance of headset speakers, which often lack adequate low-frequency response to effectively support ANC.

Classifications:

International (IPC 8-9): G10K11/16 G10K11/178 G10L21/007 G10L21/02 G10L21/0208 H03G5/00 H03G5/02 H04R1/10 H04R3/00 H04R3/04 (Advanced/Invention)

CPC: H04R1/1083 G10L21/0208 H04R2460/01

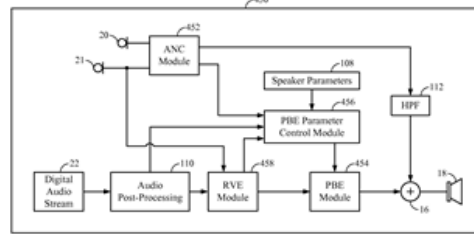
European: H04R1/10N T04R460/01

US: 381/56 381/71.1 381/94.1 381/94.2 381/98 704/200.1 704/226 704/E21.002

JP F-Term: 5D020 5D045 5D061 5D061/FF02 5D220 5D220/AA02 5D220/AA14 5D220/AA24 5D220/AB01 5D220/AB04 5D220/BA04 5J030 5J030/AA07 5J030/AA08 5J030/AB01 5J030/AB05 5J030/AC09 5J030/AC17

JP F-Index: G10K11/16/H G10K11/175 G10K11/178/110 G10K11/178/130 G10L21/007 H03G5/02/C H03G5/02/D H03G5/16/165 H04R3/00/101/Z H04R3/00/310 H04R3/00/320 H04R3/04

PatBase - US2012259626_AA

**Family:**

Publication number	Publication date	Application number	Application date
CN103460716 A	20131218	CN201280016710	20120228
CN103460716 B	20160309	CN201280016710	20120228
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EP2695394 A1	20140212	EP20120713410	20120228
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IN08106CN2013 A	20141212	IN2013CN08106	20131007
JP2014514609 T2	20140619	JP20140503661T	20120228
JP5680789 B2	20150304	JP20140503661T	20120228
KR101482488 B1	20150113	KR20137029599	20120228
KR20130137046 A	20131213	KR20137029599	20120228
US2012259626 AA	20121011	US20110326564	20111215
US8891788 BB	20141118	US20110326564	20111215
US9055367 BB	20150609	US20110326564	20111215
WO12138435 A1	20121011	WO2012US26992	20120228

Priority:

US20110473531P 20110408 US20110326564 20111215 EP20120713410 20120228
WO2012US26992 20120228

Probable Assignee: QUALCOMM INC**Assignee(s):** (std): LI REN ; QUALCOMM INC ; XIANG PEI**Assignee(s):** QUALCOMM INC SAN DIEGO**Inventor(s):** (std): LI REN ; XIANG PEI**Inventor(s):** LI REN SAN DIEGO ; XIANG PEI SAN DIEGO**Agent(s):** HOWE STEVEN; AUSTIN RAPP AND HARDMAN; AUSTIN WESLEY L REG NO 42 273

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

8) Family number: 73732085 (US2019098430A)

© PatBase

Title: SPEAKER SYSTEM AND SIGNAL PROCESSING METHOD

Abstract: A speaker system has a speaker array including a plurality of first speakers and a first filter array. A peak of the directivity of reproduced sounds output from the speaker array. And the peak being in a direction in which the plurality of first speakers are arranged, is shifted toward a wall surface due to first filter processing performed by the first filter array.

Classifications:

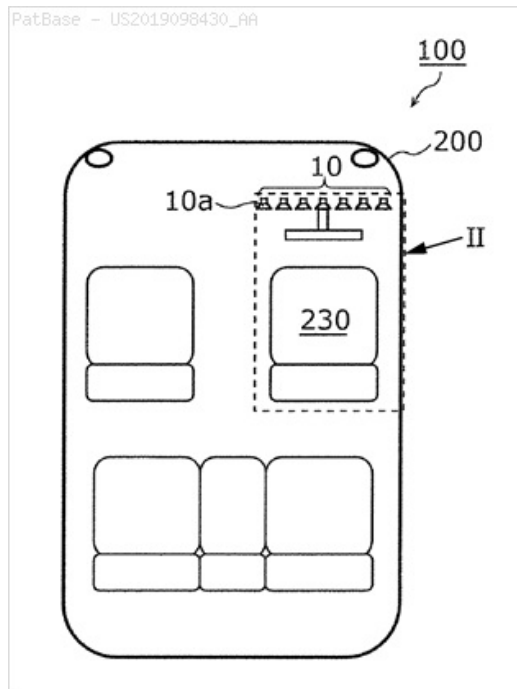
International (IPC 8-9): B60R11/02 G10K11/34 H04R1/02 H04R1/40 H04R3/00 H04R3/04 H04R3/12 H04R5/02 H04R5/04 H04R9/02 H04R9/06 H04S3/00 H04S7/00 (Advanced/Invention)

CPC: H04S7/303 H04R5/02 H04R5/04 H04R1/403 H04R2201/403

H04R3/04 H04S3/008 H04S2400/01 H04R3/12

JP F-Term: 3D020 3D020/BA02 3D020/BA10 3D020/BB01 3D020/BC01

3D020/BD05 3D020/BE03 5D017 5D017/AE12 5D017/AE16 5D018
5D018/AF22 5D061 5D220 5D220/AA16 5D220/AB06
JP F-Index: B60R11/02/S G10K11/34/110 H04R1/02/102/B
H04R1/40/310 H04R3/00/310



Family:

Publication number	Publication date	Application number	Application date
CN109587611 A	20190405	CN201811086030	20180918
JP2019068398 A2	20190425	JP20180106219	20180601
US2019098430 AA	20190328	US20180134953	20180918

Priority:

JP20170188769 20170928 JP20180106219 20180601

Probable Assignee: PANASONIC IP CORP AMERICA

Assignee(s): (std): PANASONIC IP CORP AMERICA

Assignee(s): PANASONIC INTELLECTUAL PROPERTY OF AMERICA CORP

Inventor(s): (std): MATSUMURA TOSHIYUKI ; SAKAGUCHI ATSUSHI

9) Family number: 37100106 (JP51010683 Y1)

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Classifications:

International (IPC 8-9): H03G5/02 H04R3/00 H04R3/04 (Advanced/Invention);
H03G5/00 H04R3/00 H04R3/04 (Core/Invention)

International (IPC 1-7): H03G5/02 H04R3/00

Family:

Publication number	Publication date	Application number	Application date
JP51010683 Y1	19760323	JP19700038779U	19700420

Priority:

JP19700038779U 19700420

10) Family number: 57260137 (US2016036404A)

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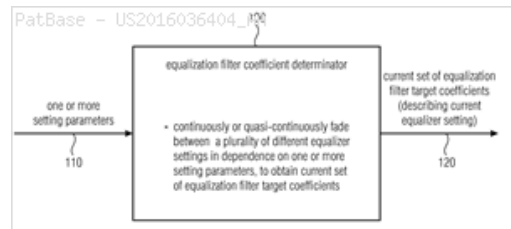
Title: EQUALIZATION FILTER COEFFICIENT DETERMINATOR, APPARATUS, EQUALIZATION FILTER COEFFICIENT PROCESSOR, SYSTEM AND METHODS

Abstract: An equalization filter coefficient determinator continuously or quasi-continuously fades between a plurality of different equalizer settings in dependence on one or more setting parameters, to obtain a current set of equalization filter target coefficients describing a current equalizer setting. A number of setting parameters is smaller than a number of equalization filter target coefficients of current set of equalization filter target coefficients. An equalization filter coefficient determinator linearly combines a plurality of equalization filter target coefficient set components in dependence on one or more setting parameters. An equalization filter coefficient determinator obtains the current set of equalization filter target coefficients in dependence on position information obtained using a two-dimensional or three-dimensional user input device. An apparatus includes a user interface, an equalization filter coefficient determinator and an equalizer. An equalization filter coefficient processor may provide sets of basis equalization filter target coefficients. A system may use an equalization filter coefficient processor and an equalization filter coefficient determinator.

Classifications:

International (IPC 8-9): H03G5/00 H03G5/02 H03G5/16 H04R3/00
H04R3/04 (Advanced/Invention);
H03G5/00 (Core/Invention)

CPC: H03G5/165 H03G5/005
US: 381/103
JP F-Term: 5D220 5D220/AB01 5J030 5J030/AA01 5J030/AB02 5J030/AB03 5J030/AC10 5J030/AC20 5J030/AC21 5J030/AC22 5J030/AC28
JP F-Index: H03G5/02/025 H04R3/00/310 H04R3/04



Family:

Publication number	Publication date	Application number	Application date
BR112015020404 A2	20170718	BR20151120404	20140221
CA2901820 AA	20150819	CA20142901820	20140221
CN105191122 A	20151223	CN201480021929	20140221
DE602014007610 D1	20170427	DE201460007610T	20140221
DE602014044271 D1	20190425	DE201460044271T	20140221
EP2770635 A1	20140827	EP20130159563	20130315
EP2959579 A1	20151230	EP20140708506	20140221
EP2959579 B1	20170315	EP20140708506	20140221
EP3151426 A1	20170405	EP20160197441	20140221
EP3151426 B1	20190403	EP20160197441	20140221
ES2628099 T3	20170801	ES20140708506T	20140221
ID201700299 A	20170127	ID2015P0005126	20140221
IN02719KN2015 A	20160624	IN2015KN02719	20150818
JP2016513419 T2	20160512	JP20150558472T	20140221
JP6130931 B2	20170517	JP20150558472T	20140221
KR101787505 B1	20171018	KR20157026643	20140221
KR20150128753 A	20151118	KR20157026643	20140221
MX2015010779 A1	20160512	MX20150010779	20140221
MX352088 B	20171108	MX20150010779	20140221
RU2015140752 A	20170330	RU20150140752	20140221
RU2658872 C2	20180625	RU20150140752	20140221
TH172651 A	20180201	TH20151004824	20140221
TR201708787 T4	20170721	TR20170008787T	20140221
US2016036404 AA	20160204	US20150830821	20150820
WO14128279 A1	20140828	WO2014EP53480	20140221

Priority:

US20130768724P 20130225	EP20130159563 20130315	EP20140708506 20140221
WO2014EP53480 20140221	EP20160197441 20140221	US20150830821 20150820

Probable Assignee: FRAUNHOFER GES

Assignee(s): (std): FRAUNHOFER GES FORSCHUNG ; FRAUNHOFER GES ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E V ; FRAUNHOFER GES ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG E V ; FRAUNHOFER SOCIETY FOR ADVANCEMENT OF APPLIED RESEARCH ; FRAUNHOFER GES ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG E V ; FRAUNKHOFER GEZELLSHAFT TSUR FERDERUNG DER ANGEVANDTEN FORSHUNG E F

Assignee(s): FRAUNHOFER GES ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG E V ; NEUGEBAUER BERNHARD ; PLOGSTIES JAN ; FRAUNKHOFER GEZELLSHAFT TSUR FERDERUNG DER ANGEVANDTEN FORSHUNG EF ; FRAUNHOFER GES ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV ; FRAUNHOFER GES ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG EV ; FRAUNHOFER GES ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV ; FLEISCHMANN FELIX ; FRAUNHOFER GES

Inventor(s): (std): PLOGSTIES JAN ; FLEISCHMANN FELIX ; NEUGEBAUER BERNHARD ; BERNHARD NEUGEBAUER ; JAN PLOGSTIES ; FELIX FLEISCHMANN ; NOJGEBAUER BERNKHARD ; PLOGSTIS YAN ; FLYAJSHMANN FELIKS

Agent(s): PERRY AND CURRIER; SCHOPPE ZIMMERMANN STOECKELER ZINKLER SCHENK AND PARTNER MBP PATENTANWAELTE; BURGER MARKUS; SALVA JOAN; REZA ADHIYANTO SAPARDAN; OOO YURIDICHESKAYA GORODISSKIJ I PARTNERY FA; CENK SEVINC; SCHOPPE ZIMMERMANN STOECKELER ZINKLER AND PARTNER ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

11) Family number: 31230139 (JP62026996U)

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Title: Resister enlargement device (Machine translation)

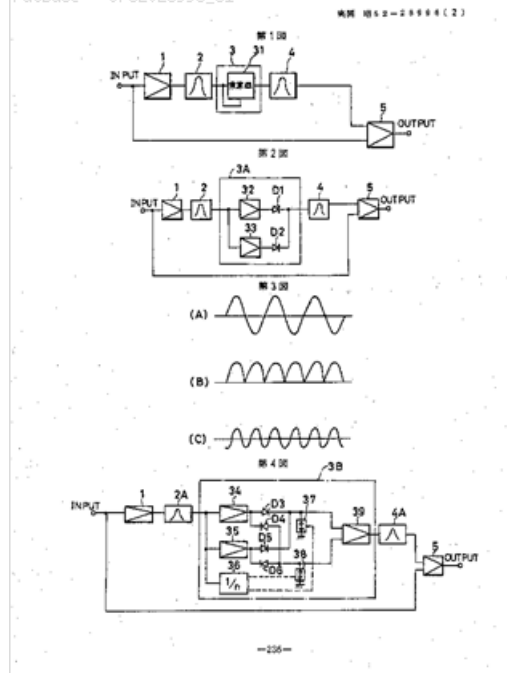
Classifications:

International (IPC 8-9): H03G5/02 H03H7/01 H04R3/00
H04R3/04 (Advanced/Invention)

International (IPC 1-7): H03G5/02 H03H7/01 H04R3/00 H04R3/04

JP F-Term: 5D020 5D020/AC00 5D220 5D220/AB03 5D220/AB04 5J024 5J024/AA04 5J024/CA00 5J024/CA17 5J024/CA18 5J024/CA21 5J024/HA10 5J024/KA05 5J030 5J030/AA00 5J030/AA06 5J030/AA07 5J030/AB00 5J030/AB01 5J030/AC01 5J030/AC09 5J030/AC11 5J030/AC19

JP F-Index: H03G5/02/E H03G5/16/165 H03H7/01/E H04R3/00/310 H04R3/00/HAA H04R3/04



Family:

Publication number	Publication date	Application number	Application date
JP2146550 Y	19980320	JP19850116355U	19850731
JP62026996 U1	19870218	JP19850116355U	19850731
JP8009990 Y2	19960321	JP19850116355U	19850731

Priority:

JP19850116355U 19850731

12) Family number: 53204168 (US2014205111A)

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Title: SOUND PROCESSING APPARATUS, METHOD, AND PROGRAM

Abstract: The present technique relates to a sound processing apparatus, a method, and a program capable of alleviating degradation of the quality of sound in a case where the gain of a sound signal is amplified. When equalizer processing for adjusting the gain of each frequency band of an input signal on the basis of a gain setting value is performed, an input signal is attenuated by an input attenuation amount derived from the gain setting value, and the equalizer processing is performed on the input signal attenuated. The amount of amplification of the gain of the input signal in the equalizer processing is estimated on the basis of the gain setting value and a weight coefficient of each frequency band derived from a generally-available music signal prepared in advance, and a difference of the estimation value and the input attenuation amount is calculated as a gain correction amount. Further, nonlinear amplification processing is performed on the input signal so as to actually amplify the input signal, which has been subjected to the equalizer processing, by a gain correction amount, and an output signal is obtained. The present technique can be applied to a sound processing apparatus.

Classifications:

International (IPC 8-9): H03G3/00 H03G5/00 H03G5/02 H03G5/04 H03G5/16 H03G9/14 H03G9/18 H04R29/00 H04R3/00 H04R3/04 (Advanced/Invention)

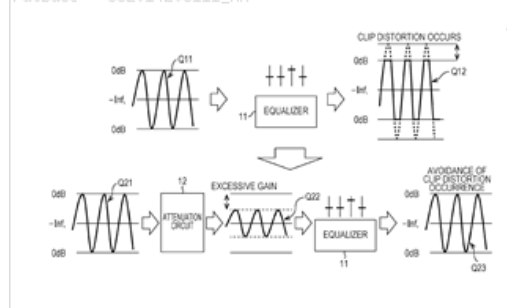
CPC: H03G5/165 H03G9/14 H03G3/001 H03G5/04 H04R29/00 H03G5/025

US: 1/1 381/103

JP F-Term: 5D020 5D020/AC05 5D020/CE04 5D220 5D220/AB01 5D220/AB08 5J030 5J030/AA02 5J030/AB05 5J030/AC02 5J030/AC10 5J030/AC20 5J030/AC21 5J030/BA04 5J030/BB06 5J030/BC02 5J030/BC11

JP F-Index: H03G9/14 H03G9/18 H04R3/00/310 H04R3/04

PatBase - US2014205111_AA



Family:

Publication number	Publication date	Application number	Application date
AU2012309702 AA	20130321	AU20120309702	20120903
BR112014005295 A2	20170404	BR20141105295	20120903
CA2844915 AA	20140211	CA20122844915	20120903
CN103782515 A	20140507	CN201280043659	20120903
EP2757685 A1	20140723	EP20120831214	20120903
IN01804CN2014 A	20160701	IN2014CN01804	20140307
JP2013065952 A2	20130411	JP20110202168	20110915
JP5845760 B2	20160120	JP20110202168	20110915

RU2014108818 A	20150920	RU20140108818	20120903
US2014205111 AA	20140724	US20120239797	20120903
US9294062 BB	20160322	US20120239797	20120903
WO13038937 A1	20130321	WO2012JP72353	20120903

Priority:

JP20110202168 20110915 WO2012JP72353 20120903

Probable Assignee: SONY CORP

Assignee(s): (std): CHINEN TORU ; HATANAKA MITSUYUKI ; SONY CORP

Inventor(s): (std): CHINEN TORU ; HATANAKA MITSUYUKI ; TORU CHINEN ; MITSUYUKI HATANAKA

Agent(s): SPRUSON AND FERGUSON; GOWLING LAFLEUR HENDERSON LLP; DEVILE JONATHAN MARK; INAMOTO YOSHIO; HAZUKI INT LLC; INAMOTO YOSHIO ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

13) Family number: 73496170 (EP3454571A1)

PatBase

Title: SOUND PROCESSING APPARATUS APPAREIL DE TRAITEMENT DE SON

Abstract: The invention provides a sound processing apparatus is capable of performing failure diagnosis while performing sound processing. A sound processing apparatus D includes a microphone 200, a band-pass filter 300, an audio signal processor 400, a Fourier transformer 500, and a signal level determiner 600. The microphone 200 is configured to simultaneously acquire an audible sound and an inaudible sound, and to convert the acquired audible and inaudible sounds into electric signals, and to output the electric signals. The band-pass filter 300 receives the electrical signals outputted from the microphone 200 and removes components of the electrical signals that are outside the audible range. The audio signal processor 400 apply predetermined signal processing to the electric signals that have passed through the band-pass filter 300. The Fourier transformer 500 obtains frequency components in an inaudible range on the basis of the electric signals outputted from the microphone 200. The signal level determiner 600 performs a first determination as to whether the frequency components in the inaudible range have a signal level being equal to or greater than a threshold value.

Classifications:

International (IPC 8-9): H04R29/00 H04R3/00

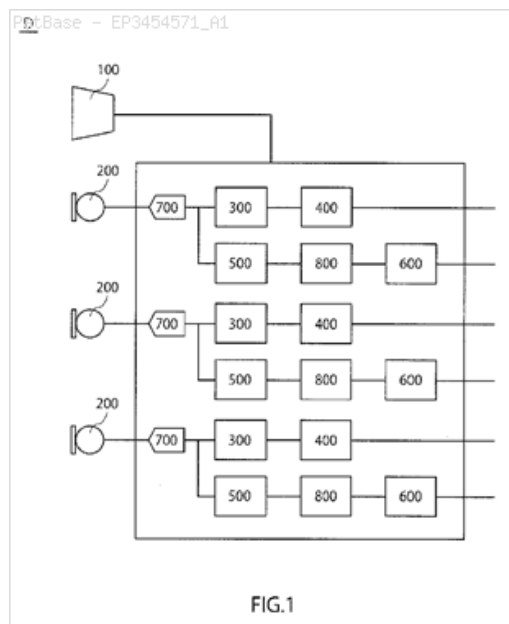
H04R3/04 (Advanced/Invention)

CPC: H04R3/04 H04R29/005 H04R2499/13

JP F-Term: 5D024 5D220 5D220/BA30

JP F-Index: H04R29/00/310 H04R29/00/320 H04R3/00/310

H04R3/00/320



Family:

Publication number	Publication date	Application number	Application date
CN109495817 A	20190319	CN201811055458	20180911
EP3454571 A1	20190313	EP20180190554	20180823
JP2019050510 A2	20190328	JP20170174067	20170911

Priority:

JP20170174067 20170911

Probable Assignee: HOSIDEN CORP

Assignee(s): (std): HOSIDEN CORP

Inventor(s): (std): YAMANAKA YOSHIFUMI ; MIYAZAWA KIYOSHI ; YAMANAKA SACHIFUMI ; MIYAZAWA SEISHI

Agent(s): BERESFORD CRUMP LLP

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

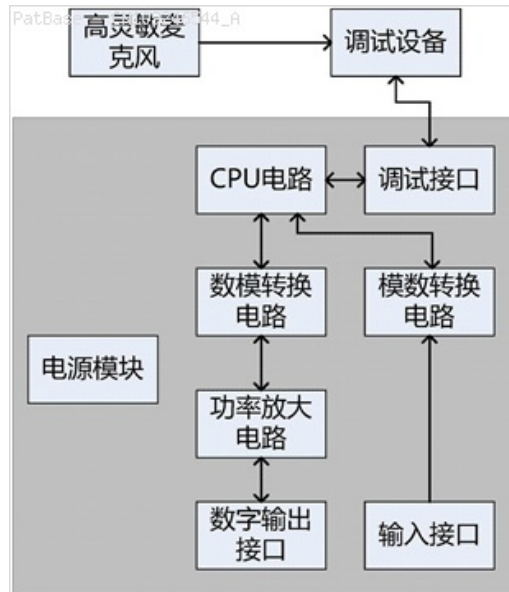
Title: INTELLIGENT TUNING DEVICE AND METHOD FOR VEHICLE

Abstract: The invention relates to the field of intelligent tuning, automobile power amplifiers and automobile modification, in particular to an intelligent tuning device and method for a vehicle. The device comprises a high-sensitivity microphone, a tuning device and a digital power amplifier device, and the digital power amplifier device comprises a CPU circuit, a power module, a digital-to-analog conversion circuit, an analog-to-digital conversion circuit and a debugging interface, wherein the digital-to-analog conversion circuit, the analog-to-digital conversion circuit and the debugging interface are connected with the CPU circuit. The analog-to-digital conversion circuit is connected with the input interface, and the digital-to-analog conversion circuit is connected with the power amplifier circuit. The power amplifier circuit is connected with the digital output interface, and the power module is connected with all power supply interfaces of the power amplifier device. The high-sensitivity microphone and the debugging interface are connected with a debugging device. Through the acquisition of an audio signal in the vehicle, the device intelligently repairs and compensates for the signal of a sound device in the vehicle through software, adjusts the output delay, and achieves the function of automatic tuning. The device further lowers the modification and upgrade threshold of a vehicle audio system, saves the cost of upgrading and modification, reduces the demand of human resources, and improves the efficiency of installation and debugging.

Classifications:

International (IPC 8-9): H04R3/00 H04R3/04 (Advanced/Invention)

CPC: H04R3/00 H04R3/04

**Family:**

Publication number	Publication date	Application number	Application date
CN109246544 A	20190118	CN201810914462	20180811

Priority:

CN201810914462 20180811

Probable Assignee: GUANGDONG MENGZHIYIN AUTOMOBILE TECH CO LTD

Assignee(s): (std): GUANGDONG MENGZHIYIN AUTOMOBILE TECH CO LTD

Assignee(s): GUANGDONG MENGZHIYIN AUTOMOBILE TECHNOLOGY CO ; GUANGDONG DREAM OF SILENCE ONBOARD TECHNOLOGY CO LTD

Inventor(s): (std): WEN YUBING

15) Family number: 47720193 (US2012128178A)

Title: SOUND REPRODUCING APPARATUS, SOUND REPRODUCING METHOD, AND PROGRAM

Abstract: Sound reproduction is controlled so as to be heard in the optimal state for the hearing function specific to elderly people. A frequency characteristic setting portion for setting the frequency characteristics of an inputted sound signal, and a sound volume setting portion for variable controlling the volume is disclosed. The frequency characteristic setting portion changes a frequency characteristic in which a sound band including a human voice band is emphasized to a frequency characteristic in which the characteristics of a gain in accordance with a frequency gradually becomes flat with an increase in the volume set by the sound volume setting portion. As a result, the frequency band of the human voice is strongly emphasized so as to help elderly people hear it at a low volume, and, as the volume grows higher, a frequency characteristic is changed to a flatter frequency characteristic, thereby making it possible to output easy-to-hear sound while reducing inconvenience caused by the emphasis of a specific frequency band.

Classifications:

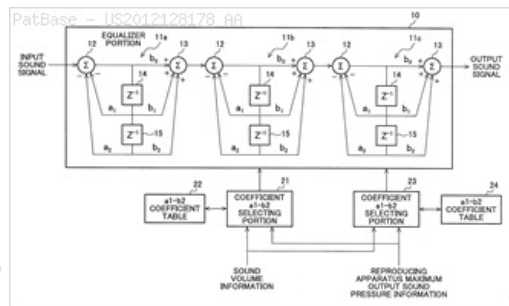
International (IPC 8-9): G10L21/02 G10L21/0264 H03G3/00 H03G5/00 H03G5/02 H03G5/16 H03G7/00 H03G9/00 H03G9/02 H04R H04R25/00 H04R3/00 H04R3/04 H04S7/00 (Advanced/Invention); G10L21/0264 (Advanced/Non-invention)

CPC: H03G9/025 G10L21/02 G10L21/0264 H03G9/005 H04R25/50 H04R2225/43 H04R2430/03 H04S7/30 H04S7/40 H04S2400/13 H04S2420/07

European: G10L21/02 H03G9/00N H03G9/02B H04R25/50 H04S7/30 S10L21/0264 T04R225/43 T04R430/03 T04S400/13 T04S420/07 T04S7/40

US: 1/1 381/107 381/107S 381/98 381/98P

JP F-Term: 5D020 5D020/AC01 5D020/CE02 5D022 5D220 5D220/AB00 5D220/AB01 5D220/AB08 5J030 5J030/AA05 5J030/AA08 5J030/AA10 5J030/AC02 5J030/AC10 5J030/AC15 5J030/AC20 5J030/AC21



Family:

Publication number	Publication date	Application number	Application date
CN102461207 A	20120516	CN201080030312	20100527
CN102461207 B	20150422	CN201080030312	20100527
HK1168707 A1	20130104	HK20120109320	20120921
IN09225CN2011 A	20130524	IN2011CN09225	20111209
JP2010137650 A1	20121115	JP20110516052T	20100527
JP5149991 B1	20130220	JP20110516052T	20100527
JP5149991 B2	20130220	JP20110516052T	20100527
MX2011012736 A1	20111216	MX20110012736	20100527
US2012128178 AA	20120524	US20100375154	20100527
US9093968 BB	20150728	US20100375154	20100527
WO10137650 A1	20101202	WO2010JP58994	20100527

Priority:

JP20090131318 20090529 JP20110516052 20100527 WO2010JP58994 20100527

Probable Assignee: SHARP KK**Assignee(s):** (std): FUJII OSAMU ; SHARP CORP ; SHARP KK**Assignee(s):** SHARP KABUSHIKI KAISHA**Inventor(s):** (std): FUJII OSAMU ; OSAMU FUJII**Agent(s):** SHANGHAI PATENT AND TRADEMARK OFFICE; OKADA HIROYUKI; TAKANO AKICHIKA; BIRCH STEWART KOLASCH AND BIRCH LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW