

INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2018/073100

A. CLASSIFICATION OF SUBJECT MATTER  
INV. H04S3/00 H04S7/00 H04R3/12 G10K11/178  
ADD.  
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED  
Minimum documentation searched (classification system followed by classification symbols)  
H04S H04R G10K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2017/053641 A1 (KAMDAR SUKETU [US] ET AL) 23 February 2017 (2017-02-23) figures 1,5,6,7 paragraphs [0026] - [0048] paragraphs [0057] - [0066] paragraph [0069]	1-15
X	US 5 815 578 A (FOSTER SCOTT H [US] ET AL) 29 September 1998 (1998-09-29) figures 1A-6A column 4, line 44 - column 10, line 3 claim 12 ----- -/--	1-15

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search  7 November 2018	Date of mailing of the international search report  14/11/2018
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer  Tilp, Jan
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International application No  
PCT/EP2018/073100

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 2007/263888 A1 (MELANSON JOHN L [US]) 15 November 2007 (2007-11-15) figures 1,2,5A-7C paragraphs [0005], [0006], [0016] paragraphs [0017], [0033] paragraphs [0053] - [0069]</p> <p style="text-align: center;">-----</p>	1-15
A	<p>US 2015/304791 A1 (CROCKETT BRETT G [US] ET AL) 22 October 2015 (2015-10-22) figures 1,2,4A-8C,11,13 paragraphs [0006], [0007], [0012] paragraphs [0013], [0046] - [0052] paragraphs [0054] - [0068] paragraphs [0072] - [0074] paragraphs [0078], [0079]</p> <p style="text-align: center;">-----</p>	1-15

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2018/073100

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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