



## SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 18 75 66 99

### Classification of the application (IPC):

H01Q 21/24, H01Q 25/00, H01Q 3/24, H01Q 13/10, H01Q 9/28, H01Q 1/24

### Technical fields searched (IPC):

H01Q

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
Y A	CN 106229617 A (AAC ACOUSTIC TECHNOLOGIES SHENZHEN CO LT) 14 December 2016 (2016-12-14) * paragraph [0018] - paragraph [0022]; figures 1-3 * & US 2017194709 A1 (JANSSON DANIEL [CN]) 06 July 2017 (2017-07-06)	1 2-8
Y A	US 2009073049 A1 (APOSTOLOS JOHN T [US]) 19 March 2009 (2009-03-19) * paragraph [0028] - paragraph [0043]; figures 3-6 *	1, 2, 5, 6, 8 3, 4, 7
Y A	US 2014176385 A1 (APOSTOLOS JOHN T [US] ET AL) 26 June 2014 (2014-06-26) * paragraph [0027] - paragraph [0043]; figures 1-5 *	1, 2, 5, 6, 8 3, 4, 7
A	US 6057802 A (NEALY J RANDALL [US] ET AL) 02 May 2000 (2000-05-02) * column 5 - column 8; figures 14-35 *	1-8
A	US 2005206572 A1 (APOSTOLOS JOHN T [US]) 22 September 2005 (2005-09-22) * paragraph [0035] - paragraph [0046]; figures 1, 5 *	1-8

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search The Hague	Date of completion of the search 30 October 2020	Examiner Keyrouz, Shady
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### CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone	P: intermediate document
Y: particularly relevant if combined with another document of the same category	T: theory or principle underlying the invention
A: technological background	E: earlier patent document, but published on, or after the filing date
O: non-written disclosure	D: document cited in the application
& : member of the same patent family, corresponding document	L: document cited for other reasons

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## ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

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EP 18 75 66 99

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 30-10-2020  
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			US	2017194709 A1	06-07-2017
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			US	6057802 A	02-05-2000
			WO	0076029 A1	14-12-2000
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			WO	2005091858 A2	06-10-2005