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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TYLER S. BUSHNELL	01/14/2019
JUSTIN D. CROSBY	01/31/2019
KEVIN TRUONG	02/02/2019
NIKOLAS T. VITT	01/31/2019
DANIEL CORONA	02/21/2019

RECEIVING PARTY DATA

Name:	APPLE INC.
Street Address:	ONE APPLE PARK WAY
City:	CUPERTINO
State/Country:	CALIFORNIA
Postal Code:	95014

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16292927

CORRESPONDENCE DATA

Fax Number: (415)576-0300

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 415-576-0200

Email: bkanter@kilpatricktownsend.com

Correspondent Name: KILPATRICK TOWNSEND & STOCKTON LLP

Address Line 1: 1100 PEACHTREE STREET

Address Line 2: SUITE 2800

Address Line 4: ATLANTA, GEORGIA 30309

ATTORNEY DOCKET NUMBER:	090911-P37633US1-1107258
NAME OF SUBMITTER:	BRIAN KANTER
SIGNATURE:	/Brian Kanter/
DATE SIGNED:	03/05/2019

Total Attachments: 7

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ASSIGNMENT

(Patent Application)

JOINT

WHEREAS, Tyler S. Bushnell, Justin D. Crosby, Kevin Truong, Nikolas T. Vitt, and Daniel Corona, hereinafter referred to as "Assignors," are the inventors of the invention described and set forth in the below-identified application for United States Letters Patent:

> Title of Invention: VIBRATION DRIVEN HOUSING COMPONENT FOR

> > AUDIO REPRODUCTION, HAPTIC FEEDBACK, AND

FORCE SENSING

Filing Date: March 5, 2019

Application No.: 16/292,927

WHEREAS, APPLE INC., a corporation of the state of California, located at One Apple Park Way, Cupertino, California 95014, United States of America, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignors, Assignors have assigned, and by these presents do assign to Assignee all right, title and interest in and to the invention and application and to all foreign counterparts (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on the same in the United States and all countries throughout the world, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignors had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution. conversion, reissue, prolongation or extension thereof.

Assignors further agree that they will, without charge to Assignors, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including patent applications and instruments of transfer, and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

Assignors hereby authorize and request Kilpatrick Townsend & Stockton LLP, 1100 Peachtree Street, Suite 2800, Atlanta, Georgia 30309, to insert herein above the application number and filing date of said application when known.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates

indicated.

Signature:

Attorney Docket No.: 090911-P37633US1-1107258

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indicated.	IN TESTIMONY WHEREOF, Assignors hav	e signed their names on the dates
Signature:	Tyler S. Bushnell	Date:

	Attorney Docket N	io.: 090911-	Assignment P37633US1-1107258
			Page 2 of 2
Signature:		Date:	31 Jan 2019
	Justin D. Czesby		
Signature:		Date:	
	Keyin Truong		
Signature:		Date:	1/3//2019

Nikolas T. Vitt

ASSIGNMENT (Patent Application)

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Tyler S. Bushnell

Assignment Attorney Docket No.: 090911-P37633US1-1107258 Page 2 of 2

Signature:		Date;
	Justin D. Crosby	
Signature:	JK:	Date: <u>03/02/2019</u>
	Kevin Truong	
Signature:		Date:
	Nikolas T. Vitt	
Signature:		Date:
	Daniel Corona	

Attorney Docket No.: 090911-P37633US1-1107258

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Assignment Attorney Docket No.: 090911-P37633US1-1107258 Page 2 of 2

Signature:	Justin D. Crosby	Datet	
Signature:	Kevin Truong	Date:	
Signature:	Nikolas T. Vitt	Date:	
Signature:	15 L/ Lan	Date:	2/21/2019

PATENT REEL: 048508 FRAME: 0046

RECORDED: 03/05/2019

Daniel Corona