

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
RAYMOND MICHAEL STITT	02/25/2021
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	DENSO INTERNATIONAL AMERICA, INC.
<b>Street Address:</b>	24777 DENSO DRIVE
<b>Internal Address:</b>	P.O. BOX 5047
<b>City:</b>	SOUTHFIELD
<b>State/Country:</b>	MICHIGAN
<b>Postal Code:</b>	48033-5244
<b>Name:</b>	DENSO CORPORATION
<b>Street Address:</b>	1-1, SHOWA-CHO
<b>City:</b>	KARIYA-CITY, AICHI-PREF.
<b>State/Country:</b>	JAPAN
<b>Postal Code:</b>	448-8661
<b>PROPERTY NUMBERS Total: 6</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16824280
Application Number:	16824367
Application Number:	16824444
Application Number:	16871351
Application Number:	17007110
Application Number:	17007152
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(248)641-0270
<i>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.</i>	
<b>Phone:</b>	248-641-1600
<b>Email:</b>	troymailroom@hdp.com
<b>Correspondent Name:</b>	HARNESS DICKEY (DENSO INTERNATIONAL AMER
<b>Address Line 1:</b>	5445 CORPORATE DR.
<b>Address Line 2:</b>	SUITE 200

PATENT

<b>Address Line 4:</b> TROY, MICHIGAN 48098	
<b>ATTORNEY DOCKET NUMBER:</b>	AJ671,672,676,701,716,717
<b>NAME OF SUBMITTER:</b>	MICHAEL P. DOERR
<b>SIGNATURE:</b>	/ Michael P. Doerr /
<b>DATE SIGNED:</b>	03/03/2021
	This document serves as an Oath/Declaration (37 CFR 1.63).
<b>Total Attachments: 3</b> source=1DIAM002353-US_2462US_2463US_2492US_2493US_2568US_2562US_DEC_ASG#page1.tif source=1DIAM002353-US_2462US_2463US_2492US_2493US_2568US_2562US_DEC_ASG#page2.tif source=1DIAM002353-US_2462US_2463US_2492US_2493US_2568US_2562US_DEC_ASG#page3.tif	

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DIAM-002353, DIAM-002462-US, DIAM-002463-US, DIAM-002492-US,  
DIAM-002493-US, DIAM-002568-US, DIAM-002562-US  
DNP202011090US01, PN210249-US, PN208883-US-ENT, PN201910394US01,  
DNP201910571US01, DNP201911302US01, DNP20191911301US01

### **DECLARATION AND ASSIGNMENT**

The undersigned acknowledges that this document is being used both as an assignment of the invention and as the declaration (37 CFR 1.63) for a Utility or Design Application entitled:

**ULTRA-HIGH FREQUENCY LOW ENERGY BASED PHONE AS A KEY ACCESS TO A  
VEHICLE USING TWO-WAY COMMUNICATION FOR MULTIPATH MITIGATION**

**UP-SAMPLING AND CROSS-CORRELATION FOR TIME OF ARRIVAL DETERMINATIONS  
IN PASSIVE ENTRY/PASSIVE START SYSTEMS**

**PASSIVE ENTRY/PASSIVE START SYSTEMS IMPLEMENTING MUSIC ALGORITHM  
BASED ANGLE OF ARRIVAL DETERMINATIONS FOR SIGNALS RECEIVED VIA  
CIRCULAR POLARIZED ANTENNAS**

**PASSIVE ENTRY/PASSIVE START SYSTEMS IMPLEMENTING CARRIER PHASE BASED  
RANGING WITH MUSIC STYLE EIGENVALUE DECOMPOSITION FOR DISTANCE  
DETERMINATIONS**

**FEED CIRCUIT FOR ANTENNA OF ANGLE OF ARRIVAL MEASUREMENT SYSTEM**

**QUEUING CONTROL FOR MESSAGES WITH DE-WHITENED TONES TRANSMITTED IN  
PHONE-AS-A-KEY SYSTEMS**

**ANTENNA SWITCHING CONTROL FOR AOA CAPTURING IN PHONE-AS-A-KEY  
SYSTEMS WITH DE-WHITENED TONE TRANSMISSION, CRC BASED VALIDATION AND  
EVENT TIMING**

As a below named inventor, I hereby declare that:

This declaration is directed to (check one):

- ☐ The attached application, or
- ☒ United States application number 16/801,401, filed on February 26, 2020;  
United States application number 16/824,280, filed on March 19, 2020;  
United States application number 16/824,367, filed on March 19, 2020;  
United States application number 16/824,444, filed on March 19, 2020;  
United States application number 16/871,351, filed on May 11, 2020;  
United States application number 17/007110, filed on August 31, 2020;  
and  
United States application number 17/007,152, filed on August 31, 2020.

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DNP201910571US01, DNP201911302US01, DNP20191911301US01

The above-identified applications were made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the above-identified applications.

I hereby acknowledge that any willful false statement made in this Declaration and Assignment is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

I hereby state that I have reviewed and understand the contents of the above-identified applications, including the claims.

I acknowledge that I am aware of the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

For good and valuable consideration, the receipt and adequacy whereof I hereby acknowledge, I hereby confirm any prior assignment to **DENSO International America Inc.**, 24777 Denso Drive, P.O. Box 5047, Southfield, MI 48033-5244, USA and **DENSO CORPORATION**, 1-1 Showa-cho, Kariya-city, Aichi-pref., 448-8661 JAPAN (hereinafter "Assignees"), and to the extent that I have not already done so, agree to assign, and hereby do, sell, assign and transfer unto Assignees and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions as described in the above-identified applications, to the above-identified applications themselves, and all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the above-identified applications, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid applications and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignees to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by me had this assignment and sale not been made, and the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any of the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights.

I hereby covenant and agree to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, any derivation proceedings relating thereto, and as to Letters Patent any supplemental examination, derivation proceeding, opposition, post grant review, reissue, re-examination, inter partes review, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignees without further or other compensation than that above set forth.

I hereby covenant that I have not made and will not make any assignment, sale, license, agreement or encumbrance which would conflict with this Declaration and Assignment.

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I hereby request the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignees, and request that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignees.

I hereby grant the patent attorneys at DENSO International America Inc., Intellectual Property Department, the power to insert on this Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

/ Raymond Michael Stitt /

**Raymond Michael Stitt**

2/25/2021

Dated