

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
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EPAS ID: PAT2928801

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	SECURITY INTEREST
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
KVH INDUSTRIES, INC.	07/02/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	BANK OF AMERICA N.A.
<b>Street Address:</b>	10943 NE STATE HWY
<b>Internal Address:</b>	WA6-112-01-01
<b>City:</b>	PORT ORCHARD
<b>State/Country:</b>	WASHINGTON
<b>Postal Code:</b>	98366
<b>PROPERTY NUMBERS Total: 52</b>	
<b>Property Type</b>	<b>Number</b>
Patent Number:	5020902
Patent Number:	5126666
Patent Number:	5340371
Patent Number:	5444534
Patent Number:	5481358
Patent Number:	5512904
Patent Number:	5517205
Patent Number:	5552887
Patent Number:	5720580
Patent Number:	5739944
Patent Number:	5768462
Patent Number:	5835057
Patent Number:	6041149
Patent Number:	6058760
Patent Number:	6134356
Patent Number:	6354132
Patent Number:	6351310
Patent Number:	6370289
Patent Number:	6429939
Patent Number:	6441779
<b>PATENT</b>	

Property Type	Number
Patent Number:	6466596
Patent Number:	6535657
Patent Number:	6539134
Patent Number:	6563589
Patent Number:	6594020
Patent Number:	6703821
Patent Number:	6707558
Patent Number:	6718097
Patent Number:	6763153
Patent Number:	6836334
Patent Number:	6856300
Patent Number:	6864347
Patent Number:	6891622
Patent Number:	6967619
Patent Number:	6977614
Patent Number:	7102571
Patent Number:	7120323
Patent Number:	7317847
Patent Number:	7397442
Patent Number:	7443355
Patent Number:	7481588
Patent Number:	8061226
Patent Number:	8334815
Patent Number:	8497810
Patent Number:	8723747
Patent Number:	D325041
Patent Number:	D493164
Patent Number:	D625299
Application Number:	12883252
Application Number:	13974886
Application Number:	13974789
Application Number:	61933958

#### CORRESPONDENCE DATA

Fax Number: (617)345-9020

*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: 6173459000

Email: tmdocket@hinckleyallen.com

Correspondent Name: ANDREA J. MEALEY

**PATENT**

**REEL: 033280 FRAME: 0943**

<b>Address Line 1:</b>	28 STATE STREET
<b>Address Line 2:</b>	HINCKLEY ALLEN & SNYDER LLP
<b>Address Line 4:</b>	BOSTON, MASSACHUSETTS 02109

<b>NAME OF SUBMITTER:</b>	ANDREA J. MEALEY
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<b>SIGNATURE:</b>	/Andrea J Mealey/
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<b>DATE SIGNED:</b>	07/08/2014
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	This document serves as an Oath/Declaration (37 CFR 1.63).
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**Total Attachments: 8**

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COLLATERAL ASSIGNMENT FOR SECURITY

(PATENTS)

THIS COLLATERAL PATENT ASSIGNMENT (this "Assignment") dated as of July 2, 2014 by **KVH INDUSTRIES, INC.**, a Delaware corporation with a principal place of business at 50 Enterprise Center, Middletown, Rhode Island 02842 ("Assignor"), in favor of **BANK OF AMERICA, N.A.**, as Administrative Agent, having offices at WA6-112-01-01, Port Orchard, Washington 98366 (together with its successors and assigns, "Assignee"). Capitalized terms used herein and not otherwise defined herein shall have the meanings set forth in the Security Agreement, as defined below.

WHEREAS, pursuant to the terms of a Security Agreement dated as of the date hereof by and between Assignor and Assignee (as amended from time to time, the "Security Agreement"), Assignor granted to Assignee a security interest in all of Assignor's assets, including, without limitation, the intellectual property described on Schedule A to secure, inter alia, the payment and performance of the Obligations; and

NOW THEREFORE, FOR GOOD AND VALUABLE CONSIDERATION, THE RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED, AND SUBJECT TO THE CONDITIONS SET FORTH HEREIN:

1. As collateral security for the payment and performance in full of all of the Obligations, Assignor does hereby confirm and ratify the collateral assignment and security interest granted unto Assignee in all of Assignor's right, title and interest in, to and under the following, whether presently existing or hereafter arising or acquired, as more fully set forth in the Security Agreement:

(i) each patent and each registration thereof, and each patent registration application owned by Assignor, including, without limitation, each such patent and patent registration application set forth on Schedule A, attached hereto and incorporated herein by reference; and

(ii) all proceeds of the foregoing, including, without limitation, any claim or causes of action of Assignor against any third parties for past, present or future infringement of any of the foregoing, with the right to sue and recover the same in Assignee's own name and for its own use, including all rights corresponding thereto throughout the world and all re-issues, divisions, continuations, renewals, extensions and continuations-in-part thereof;

(all of the foregoing, individually and collectively, the "Patents").

2. Assignor does hereby acknowledge, affirm and represent that:

(i) the rights and remedies of Assignee with respect to its interest in the Patents are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein.

(ii) that nothing in this Assignment shall be in derogation of the rights and remedies of Assignee in and to the Patents as set forth in the Security Agreement and as shall be available at law or in equity.

(iii) Schedule A contains a true and complete record of (a) all U.S. patents owned by Assignor, and (b) all U.S. applications pending for registration of patents owned by Assignor.

(iv) to the best of Assignor's knowledge, the Patents are subsisting and have not been adjudged invalid or unenforceable, in whole or in part.

(v) to the best of Assignor's knowledge, each of the Patents is valid and enforceable.

(vi) to the best of Assignor's knowledge, Assignor is the sole and exclusive owner of the entire and unencumbered right, title and interest in and to each of the Patents, free and clear of any liens, charges and encumbrances, including, without limitation, licenses, shop rights and covenants by Assignor not to sue third persons.

(vii) Assignor has the unqualified right to enter into this Assignment and perform its terms.

3. Assignor covenants that, until all of the Obligations shall have been satisfied in full, it will not enter into any agreement which is inconsistent with Assignor's obligations under this Assignment unless permitted under the Credit Agreement, without Assignee's prior written consent.

4. Assignor covenants that if, before the Obligations shall have been satisfied in full, Assignor shall obtain additional registered patents, or additional patent applications or patent for any reissue, division, continuation, renewal, extension, or continuation-in-part of any Patent or any improvement on any Patent, or become the owner of any registration applications for patents, the provisions of this Assignment shall automatically apply thereto and Assignor shall give to Assignee prompt notice thereof in writing.

5. Assignor shall indemnify, defend and hold Assignee, its affiliates, directors, officers, employees and agents ("Assignee's Indemnified Parties") harmless from and against all damages, losses or expenses suffered or paid as a result of any and all claims, demands, suits, causes of action, proceedings, judgments and liabilities, including reasonable attorneys' fees incurred in litigation or otherwise assessed (collectively, the "Losses"), incurred or sustained by or against Assignee's Indemnified Parties or any of them with respect to or arising out of or in

any way connected with this Assignment, except as a result of gross negligence or willful misconduct of Assignee or Assignee's Indemnified Parties and further excluding in any event, Losses incurred solely as a result of any claim of infringement by any third party based on the use of any patent by Assignee or any other entity following any foreclosure by Assignee of its security interest in the Patents.

6. Assignor authorizes Assignee to modify this Assignment by amending Schedule A to include any future U.S. patents or patent applications owned by Assignor.

7. At such time as all of the Obligations have been paid in full, this Assignment shall terminate and the Assignee shall, upon the written request of the Assignor, execute and deliver to the Assignor all assignments and other instruments as may be necessary or proper to reassign and reconvey to and re-vest in the Assignor, the entire right, title and interest to the Patents previously granted, assigned, transferred and conveyed to the Assignee by the Assignor pursuant to this Assignment, as fully as if this Assignment had not been made, subject to any disposition of all or any part thereof which may have been made by the Assignee pursuant hereto or the Security Agreement

[Signature Page Follows]

IN WITNESS WHEREOF, Assignor has caused this Assignment to be duly executed by its duly authorized officer as an instrument under seal as of the date first set forth above.

KVH INDUSTRIES, INC.,  
a Delaware corporation

By: Peter Rendall  
Name: Peter Rendall  
Title: Chief Financial Officer

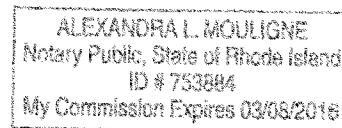
State/Commonwealth of Rhode Island )  
County of Newport ) ss

On this 30<sup>th</sup> day of June, 2014, before me a Notary Public in and for said State/Commonwealth, duly commissioned and sworn, personally appeared Peter Rendall, Chief Financial Officer of KVH Industries, Inc., proved to me through satisfactory evidence of identification, which was photographic identification with signature issued by a federal or state government agency, or personal knowledge of the undersigned, to be the person executing the foregoing instrument/agreement and acknowledged to me that he subscribed his name thereto as his free act and deed and the free act and deed of said KVH Industries, Inc.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the date first above written.

Alexandra Mouligné  
Notary Public  
Alexandra Mouligné  
Print Name  
My Commission Expires: 03/08/2016

[SEAL]



SCHEDULE A

	<b>Title</b>	<b>Patent No.</b>	<b>Filing Date</b>	<b>Issue Date</b>
1.	Rangefinder with heads-up display	5,020,902	June 22, 1989	June 4, 1991
2.	Multifunction monocular	D325,041	May 4, 1989	March 31, 1992
3.	Method and apparatus for substantially eliminating magnetic field interference to a magnetometer caused by DC current carrying conductors	5,126,666	November 1, 1990	June 30, 1992
4.	Optical fiber splicing chuck	5,340,371	March 31, 1993	August 23, 1994
5.	Coil mounting arrangement for fiber optic gyroscope	5,444,534	December 27, 1993	August 22, 1995
6.	Coil mounting arrangement for fiber optic gyroscope using a gel loaded with particles	5,481,358	April 21, 1994	January 2, 1996
7.	Method and Apparatus of Establishing a Vehicle Azimuth	5,512,904	June 13, 1994	April 30, 1996
8.	Two axis mount pointing apparatus	5,517,205	March 31, 1993	May 14, 1996
9.	Fiber optic rotation sensor or gyroscope with improved sensing coil	5,552,887	April 7, 1995	September 3, 1996
10.	Apparatus for and method of shoring a trench	5,720,580	December 22, 1995	February 24, 1998
11.	Support System for Resonating Element or Phase Modulator	5,739,944	October 28, 1996	April 14, 1998
12.	Grooved optical fiber for use with an electrode and a method for making same	5,768,462	March 5, 1996	June 16, 1998
13.	Mobile satellite communication system including a dual-frequency, low-profile, self-steering antenna assembly	5,835,057	January 22, 1997	November 10, 1998
14.	Grooved optical fiber for use with an electrode and a method for making same	6,041,149	June 16, 1998	March 21, 2000
15.	Apparatus and method for sensing angular displacement	6,058,760	August 18, 1998	May 9, 2000



	<b>Title</b>	<b>Patent No.</b>	<b>Filing Date</b>	<b>Issue Date</b>
16.	Grooved optical fiber for use with an electrode and a method for making same	6,134,356	December 3, 1999	October 17, 2000
17.	Reduced minimum configuration interferometric fiber optic gyroscope with simplified signal processing electronics	6,351,310	October 4, 2000	February 26, 2002
18.	Apparatus and method for sensing angular displacement	6,354,132	April 10, 2000	March 12, 2002
19.	Apparatus and method for electronic RIN reduction in fiber-optic sensors	6,370,289	January 12, 2000	April 9, 2002
20.	DSP signal processing for open loop fiber optic sensors	6,429,939	July 13, 2000	August 6, 2002
21.	System and method of carrier-phase attitude determination	6,441,779	June 30, 2000	August 27, 2002
22.	Broadening the linewidth of a semiconductor laser	6,466,596	May 10, 2000	October 15, 2002
23.	Polarization transformer	6,535,657	May 16, 2002	March 18, 2003
24.	Polarization transformer	6,539,134	June 22, 1999	March 25, 2003
25.	Reduced minimum configuration fiber optic current sensor	6,563,589	July 13, 2000	May 13, 2003
26.	Method for controlling fiber optic sensor scale factor using amplitude modulation	6,594,020	July 13, 2001	July 15, 2003
27.	Faraday-effect current sensor with improved vibration response	6,703,821	February 28, 2001	March 9, 2004
28.	Decreasing the effects of linear birefringence in a fiber-optic sensor by use of Berry's topological phase	6,707,558	August 2, 2001	March 16, 2004
29.	Method of incorporating optical material into an optical fiber	6,718,097	July 11, 2001	April 6, 2004
30.	Apparatus and Method For Electronic RIN Reduction in Fiber- Optic Sensors Utilizing Filter with Group Delay	6,763,153	April 17, 2002	July 13, 2004
31.	Mobile Antenna	D493,164	January 8, 2003	July 20, 2004

	<b>Title</b>	<b>Patent No.</b>	<b>Filing Date</b>	<b>Issue Date</b>
32.	Angle random walk (ARW) noise reduction in fiber optic sensors using an optical amplifier	6,836,334	October 31, 2001	December 28, 2004
33.	Feed Network & Method for an Offset Stacked Patch Antenna Array	6,856,300	November 8, 2002	February 15, 2005
34.	Nonlinear optical chiral compounds and devices incorporating same	6,864,347	June 28, 2002	March 8, 2005
35.	Current sensor	6,891,622	August 15, 2001	May 10, 2005
36.	Low Noise Block	6,967,619	January 8, 2004	November 22, 2005
37.	Microstrip Transition and Network	6,977,614	January 8, 2004	December 20, 2005
38.	Offset stacked patch antenna and method	7,102,571	November 8, 2002	September 5, 2006
39.	Reduction of linear birefringence in circular-cored single-mode fiber	7,120,323	August 2, 2001	October 10, 2006
40.	Optical Fiber Composite, Devices, and Methods of Making Same	7,317,847	October 20, 2006	January 8, 2008
41.	Radome With Heating Element	7,397,442	November 28, 2005	July 8, 2008
42.	Antenna Feed-Tube-To-Amplifier Coupling	7,443,355	November 9, 2006	October 28, 2008
43.	Optical fiber composite, devices, and methods of making same	7,481,588	November 21, 2006	January 27, 2009
44.	Antenna Assembly	D625,299	November 10, 2006	October 12, 2010
45.	System and method for closed loop gyroscope stabilization	8,061,226	June 2, 2008	November 22, 2011
46.	Multi-feed antenna system for satellite communications	8,334,815	July 20, 2009	December 18, 2012
47.	Multi-band antenna system for satellite communications	8,497,810	March 17, 2010	July 30, 2013
48.	Polarization phase device and a feed assembly using the same in the antenna system	8,723,747	March 20, 2012	May 13, 2014

	<b>Title</b>	<b>Patent No.</b>	<b>Filing Date</b>	<b>Issue Date</b>
49.	Multi-Band Antenna System for Satellite Communications	Application No: 12/883,252	September 16, 2010	<i>Pending</i>
50.	Agile Diverse Polarization Multi-frequency Band Antenna Feed With Rotatable Integrated Distributed Transceivers	Application No: 13/974,886	August 23, 2014	<i>Pending</i>
51.	High Efficiency Agile Polarization Diversity Compact Miniaturized Multi-Frequency Band Antenna System With Integrated Distributed Transceivers	Application No: 13/974,789	August 23, 2014	<i>Pending</i>
52.	System and Methods for Delivery of Content to Seagoing Vessels	Application No: 61/933,958	January 31, 2014	<i>Pending</i>