

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4405566

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST
CONVEYING PARTY DATA	
Name	Execution Date
ASE HOLDINGS, INC.	05/08/2017
AERO SYSTEMS ENGINEERING, INC.	05/08/2017
AS ACQUISITION, INC.	05/08/2017
RECEIVING PARTY DATA	
Name:	FIRSTBANK, AS ADMINISTRATIVE AGENT
Street Address:	211 COMMERCE STREET
Internal Address:	SUITE 300
City:	NASHVILLE
State/Country:	TENNESSEE
Postal Code:	37201
PROPERTY NUMBERS Total: 6	
Property Type	Number
Patent Number:	6725912
Patent Number:	6748800
Patent Number:	6997049
Patent Number:	7153136
Patent Number:	8863895
Application Number:	14538996
CORRESPONDENCE DATA	
Fax Number:	(615)313-3972
<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>	
Phone:	615-244-5200
Email:	francine.vanaelst@stites.com
Correspondent Name:	STITES & HARBISON PLLC
Address Line 1:	401 COMMERCE STREET
Address Line 2:	SUITE 800
Address Line 4:	NASHVILLE, TENNESSEE 37219
ATTORNEY DOCKET NUMBER:	18380N-170208
NAME OF SUBMITTER:	FRANCINE M VANAELST

PATENT

SIGNATURE:	/Francine VanAelst/
DATE SIGNED:	05/09/2017
Total Attachments: 7 source=FB AS Acquisition Inc - Patent Security Agreement (2)#page1.tif source=FB AS Acquisition Inc - Patent Security Agreement (2)#page2.tif source=FB AS Acquisition Inc - Patent Security Agreement (2)#page3.tif source=FB AS Acquisition Inc - Patent Security Agreement (2)#page4.tif source=FB AS Acquisition Inc - Patent Security Agreement (2)#page5.tif source=FB AS Acquisition Inc - Patent Security Agreement (2)#page6.tif source=FB AS Acquisition Inc - Patent Security Agreement (2)#page7.tif	

PATENT SECURITY AGREEMENT

This Patent Security Agreement, dated as of May 8, 2017 ("Patent Security Agreement"), is recorded with the Assignment Division of the United States Patent and Trademark Office (the "PTO") to provide notice of that security interest granted in those certain Security Agreements, dated of even date herewith (the "Primary Security Agreements"), among each of ASE HOLDINGS, INC., a Delaware corporation ("ASE Holdings"), AERO SYSTEMS ENGINEERING, INC., a Minnesota corporation ("Aero Systems"), and AS ACQUISITION, INC., a Delaware corporation (jointly and severally, the "Debtors"), and FIRSTBANK, as Administrative Agent, a Tennessee banking corporation ("Agent").

Debtors and Agent hereby agree as follows:

1. Definitions; Interpretations.

- (a) *Definitions in Primary Security Agreement.* Except as set forth in the introductory paragraph and below, all capitalized terms used in this Patent Security Agreement and not defined in this Patent Security Agreement shall have the meanings ascribed to them in the Primary Security Agreements.
- (b) *Certain Defined Terms.* As used in this Patent Security Agreement, the following terms shall have the following meanings:
 - (i) "Collateral" has the meaning set forth in *Section 2(a)*.
 - (ii) "Commercial Tort Claims" has the meaning set forth in the UCC.
 - (iii) "UCC" means the Uniform Commercial Code as adopted and in effect in the States of Tennessee, Delaware and Minnesota, as applicable.
- (c) *UCC Defined Terms.* Except as otherwise defined in this Patent Security Agreement, terms used in this Patent Security Agreement shall have the meanings ascribed to them in the UCC.
- (d) *Construction.* In this Patent Security Agreement, the following rules of construction and interpretation apply as well as any rules of construction and interpretation applicable to the Primary Security Agreement consistent with the following (which are hereby incorporated into this Patent Security Agreement by reference): (i) No reference to "proceeds" in this Patent Security Agreement authorizes any sale, transfer, or other disposition of any Collateral by Debtors; (ii) "Includes" and "including" are not limiting; (iii) "Or" is not exclusive; (iv) "All" includes "any" and "any" includes "all."

2. Security Interest.

- (a) Grant. As security for the payment of the Obligations, Debtors hereby grant to Agent a security interest in all of Debtors' right, title, and interest in, to, and under the following property (in each case whether now or hereafter existing or arising,

or in which Debtors now have or hereafter own, acquire, or develop an interest, and wherever located, collectively, the "Collateral"):

- (i) All patents and patent applications, domestic or foreign (including those identified on *Exhibit A*, attached to and made a part of this Patent Security Agreement), all reissues, divisions, continuations, renewals, extensions, and continuations-in-part thereof (collectively, "Patents"), all licenses related to any of the foregoing and all income and royalties with respect to any licenses, all rights to sue for past, present, or future infringement of the foregoing, and all rights arising therefrom and pertaining thereto;
- (ii) All general intangibles and all intellectual or other intangible property of Debtors of any kind or nature and not otherwise described above.
- (iii) All proceeds of any and all of the foregoing Collateral (including rights to payment, accounts and proceeds of infringement suits) and, to the extent not otherwise included, all payments under insurance (whether or not Agent is the loss payee thereof) or any indemnity, warranty or guaranty payable by reason of loss or damage to or otherwise with respect to the foregoing Collateral.

- 3. Supplement. The parties have entered into this Patent Security Agreement in conjunction with the Primary Security Agreements. Agent's rights and remedies with respect to the security interests granted in this Patent Security Agreement are without prejudice to, and are in addition to those set forth in the Primary Security Agreements or any other security documents referenced in the Primary Security Agreements, all terms and provisions of which are incorporated into this Patent Security Agreement by this reference. All covenants, terms, and provisions of the Patent Security Agreement and the Primary Security Agreements are cumulative, and shall be performed and satisfied in accordance with their respective terms.
- 4. Representations and Warranties. Each Debtor represents and warrants to Agent that a true and correct list of all of the existing Patents registered or applied for before a governmental authority is set forth in *Exhibit A*.
- 5. Further Acts. On a continuing basis, and at Debtors' expense, each Debtor shall make, execute, acknowledge and deliver, and file and record in the proper filing and recording places, all such instruments and documents, and take all such action as may be reasonably necessary or advisable or may be reasonably requested by Agent (a) to carry out the intent and purpose of this Patent Security Agreement, or for assuring, confirming or protecting the grant or perfection of the security interest granted or purported to be granted in this Patent Security Agreement, (b) to ensure Debtor's compliance with this Patent Security Agreement or (c) to enable Agent to exercise and enforce its rights and remedies under this Patent Security Agreement with respect to the Collateral, including any documents for filing with the PTO or any applicable state office. Agent may record this Patent Security Agreement, an abstract of it, or any other document that describes Agent's interest in the Collateral with the PTO, at Debtors' expense. In addition, each

Debtor authorizes Agent to file financing statements describing the Collateral in any UCC filing office Agent deems appropriate. If a Debtor acquires a Commercial Tort Claim in excess of \$500,000 related to the Collateral after litigation or any other proceeding has commenced related to such Commercial Tort Claim, the Debtor shall promptly notify Agent in a writing signed by the Debtor of the details related to it and grant Agent in such writing a security interest in such Commercial Tort Claim and in the proceeds of it, all upon the terms of this Patent Security Agreement.

6. Authorization to Supplement. If any of the Debtors obtains any ownership interest in any new patent application or patent for any reissue, division, or continuation of any patent (collectively, "New Patents"), the provisions of this Patent Security Agreement shall automatically apply to them. Each Debtor shall give prompt written notice to Agent regarding any such New Patent rights. Upon written notice of any New Patent right by a Debtor to Agent, the parties shall mutually agree to modify this Patent Security Agreement by amending *Exhibit A* to include any such New Patent rights. Notwithstanding the foregoing, no failure to so modify *Exhibit A* or this Patent Security Agreement shall in any way affect, invalidate or detract from Agent's continuing security interest in all Collateral, whether or not listed on *Exhibit A*.
7. Binding. This Patent Security Agreement shall be binding upon, inure to the benefit of, and be enforceable by the Debtors, Agent, and their respective successors and assigns. None of the Debtors may assign, transfer, hypothecate, or otherwise convey its rights, benefits, obligations, or duties under this Patent Security Agreement except as specifically permitted by the Primary Security Agreement.
8. Governing Law. This Patent Security Agreement shall be governed by, and construed in accordance with, the law of the State of Tennessee, except to the extent the laws of the State of Delaware apply to the perfection or priority of the security interests in favor of Agent and except as required by mandatory provisions of law.
9. Counterparts. This Patent Security Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, and all of which taken together shall constitute a single agreement.
10. Severability. If one or more provisions contained in this Patent Security Agreement are declared invalid, illegal or unenforceable in any respect in any jurisdiction or with respect to any party, such invalidity, illegality or unenforceability in such jurisdictions or with respect to such parties shall, to the fullest extent permitted by applicable law, not invalidate or render illegal or unenforceable any such provision in any other jurisdiction or with respect to any other party, or any or any other provisions of this Patent Security Agreement.
11. Notices. All notices and other communications required under this Patent Security Agreement shall be delivered in accordance with the Primary Security Agreement.
12. Entire Agreement. This Patent Security Agreement (including *Exhibit A*) and the Primary Security Agreements, together with any and all exhibits and schedules attached

to the foregoing, contain the entire agreement of the parties with respect to the subject matter of them, and supersede all prior drafts and communications related to the same subject matter. To the extent there is any direct conflict between this Patent Security Agreement and the Primary Security Agreements, the terms and conditions in the Primary Security Agreements shall govern. Neither this Patent Security Agreement nor any provision of it may be modified, amended, or waived except by the written agreement of the parties, as set forth in the Primary Security Agreements.

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IN WITNESS WHEREOF, this Patent Security Agreement has been executed and delivered
as of the date first above written.

ASE HOLDINGS, INC.

By: David H. Meier
Name: David Meier
Title: President and CEO

AERO SYSTEMS ENGINEERING, INC.

By: David H. Meier
Name: David Meier
Title: President and CEO

AS ACQUISITION, INC.


By: David H. Meier
Name: David Meier
Title: President and CEO

Patent Security Agreement

18380N:170208;1220486;3:NASHVILLE

PATENT
REEL: 042307 FRAME: 0918

**FIRSTBANK, AS ADMINISTRATIVE
AGENT**

By: 
Name: Doug Remke
Title: Senior Vice President

Patent Security Agreement

18380N:170208:1220486:3:NASHVILLE

**PATENT
REEL: 042307 FRAME: 0919**

Patent or Application Number	Country	Title	Priority Date	Filing Date	Issue Date
6,725,912	USA	Wind tunnel and heat exchanger therefor	05.21.99	05.18.00	04.27.04
6,748,800	USA	Wind tunnel and collector configuration therefor	08.29.01	08.28.02	06.15.04
6,997,049	USA	Wind tunnel and collector configuration therefor	08.29.01	11.04.03	02.14.06
04795778.2	Europe	Wind tunnel and collector configuration therefor	11.04.03	10.20.04	N/A
7,153,136	USA	Free fall simulator	08.20.02	08.18.03	12.26.06
8,863,895	USA	Silencer incorporating elongated members	03.21.12	03.20.13	10.21.14
2868037	Canada	Silencer incorporating elongated members	03.21.12	03.20.13	06.21.16
137645163.4	Europe	Silencer incorporating elongated members	03.21.12	03.20.13	N/A
14/538,996	USA	System and method for improving engine thrust measurement accuracy (provisional)	11.12.13	11.12.14	N/A
2,870,512	Canada	System and method for improving engine thrust measurement accuracy (provisional)	11.12.13	11.12.14	N/A
1606651.6	U.K.	System and method for improving engine thrust measurement accuracy (provisional)	11.12.13	11.12.14	N/A