

**SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM S-8

**REGISTRATION STATEMENT UNDER
THE SECURITIES ACT OF 1933**

AMTECH SYSTEMS, INC.

(Exact name of registrant as specified in its charter)

Arizona

(State or other jurisdiction of incorporation or organization)

86-0411215

(I.R.S. Employer Identification No.)

131 South Clark Drive, Tempe, Arizona

(Address of Principal Executive offices)

85281

(Zip Code)

2007 Employee Stock Incentive Plan

(Full title of the plan)

Robert T. Hass
Amtech Systems, Inc.
131 South Clark Drive
Tempe, Arizona 85281

(Name and address of agent for service)

(480) 967-5146

(Telephone number, including area code, of agent for service)

With copy to:

Christopher D. Johnson, Esq.
Squire, Sanders & Dempsey L.L.P.
40 North Central Avenue, Suite 2700
Phoenix, Arizona 85004
(602) 528-4000

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities To Be Registered	Amount To Be Registered⁽¹⁾	Proposed Maximum Offering Price Per Share⁽²⁾	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.01 par value	500,000	\$10.89	\$5,445,000	\$167.17

(1) Pursuant to Rule 416 under the Securities Act, this registration statement also includes such indeterminate number of shares of common stock as may be issued from time to time by reason of any stock dividend, stock split, recapitalization or other similar transactions.

(2) Estimated solely for the purpose of calculating the amount of the registration fee, pursuant to Rule 457(c) under the Securities Act of 1933, as amended. The price per share and aggregate offering price are based on the average of the high and low sales prices for shares of common stock of Amtech Systems, Inc., on August 10, 2007, as reported on the NASDAQ Global Stock Market.

EXPLANATORY NOTE

This Registration Statement on Form S-8 relates to the registration of 500,000 shares of common stock issuable on exercise of options to be

granted under the 2007 Employee Stock Incentive Plan of Amtech Systems, Inc. (the "Plan") to employees of Amtech Systems, Inc. (the "Company" or the "Registrant"). On May 18, 2007, the shareholders of Amtech approved the adoption of the Plan. This registration statement is filed pursuant to paragraph A of the General Instructions to Form S-8 to register securities of the Registrant to be offered under an employee benefit plan to its employees.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The documents containing the information specified in Part I, Items 1 and 2, will be delivered to current and former employees in accordance with Form S-8 and Rule 428 of the Securities Act of 1933, as amended (the "Securities Act").

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents are hereby incorporated by reference into this Amendment and shall be deemed a part hereof:

(a) the prospectus filed pursuant to Rule 424(b) under the Securities Act with the Securities and Exchange Commission ("SEC") by Amtech on February 1, 2007 (File No. 333-139592);

(b) the Annual Report of Amtech on Form 10-K for the fiscal year ended September 30, 2006 filed by Amtech on December 21, 2006 and the amendment thereto on Form 10-K/A filed by Amtech on January 29, 2007;

(c) all other reports filed by Amtech with the Securities and Exchange Commission pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act") subsequent to September 30, 2006; and

(d) the description of Amtech's common stock contained in Amtech's registration statement filed pursuant to Section 12 of the Exchange Act.

All documents subsequently filed by Amtech with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date of filing such documents.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Pursuant to Amtech's Articles of Incorporation, it shall indemnify any and all of its existing and former directors, officers, employees, and agents against all expenses incurred by them and each of them, including, but not limited to legal fees, judgments, penalties, and amounts paid in settlement or compromise, which may arise or be incurred, rendered, or levied in any legal action brought or threatened against any of them for or on account of any action or omission alleged to have been committed while acting within the scope of employment as director, officer, employee or agent of the corporation, whether or not any action is or has been filed against them and whether or not any settlement or compromise is approved by a court, indemnification shall be made by the corporation whether the legal action brought or threatened is by or in the right of the corporation or by any other person. Whenever any existing or former director, officer, employee, or agent shall report to the President of the corporation or the chairman of the Board of Directors that he or she has incurred or may incur expenses, including, but not limited to, legal fees, judgments, penalties, and amounts paid in settlement or compromise in a legal action brought or threatened against him or her for or on account of any action or omission alleged to have been committed by him or her while acting within the scope of his or her employment as a director, officer, employee or agent of the corporation, the Board of Directors shall, at its next regular or at a special meeting held within a reasonable time thereafter, determine in good faith, whether in regard to the matter involved in the action or contemplated action, such person acted, failed to act, or refused to act willfully or with gross negligence or with fraudulent or criminal intent. If the Board of Directors determines, in good faith, that such person did not act, fail to act, or refuse to act willfully or with gross negligence or with fraudulent or criminal intent, in regard to the matter involved in the action or contemplated action, such person acted, failed to act, or refused to act willfully or with gross negligence or with fraudulent criminal intent, indemnification shall be mandatory and shall be automatically extended as specified herein; provided, that the corporation shall have the right to refuse indemnification in any instance in which the person to whom

indemnification would otherwise have been applicable shall have unreasonably refused to permit the corporation, at its own expense and through counsel of its own choosing, to defend him or her in the action.

Section 10-851 of Arizona's Revised Statutes enables a corporation to eliminate or limit personal liability of members of its board of directors for violations of their fiduciary duty of care. However, Arizona law does not permit the elimination of a director's or officer's liability: (i) in connection with a proceeding by or in the right of the corporation in which the director was adjudged liable to the corporation; and (ii) in connection with any other proceeding charging improper financial benefit to the director, whether or not involving action in the director's official capacity, in which the director was adjudged liable on the basis that financial benefit was improperly received by the director. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling Amtech pursuant to the foregoing provision, Amtech has been informed that in the opinion of the SEC such indemnification is against public policy as expressed in such Act and is therefore unenforceable.

Item 7. Exemption from Registration Claimed.

Not applicable.

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Item 8. Exhibits.

Exhibit Number	Description
4.1	2007 Employee Stock Incentive Plan of Amtech Systems, Inc.*
5	Opinion of Squire, Sanders & Dempsey L.L.P., including consent**
23.1	Consent of Counsel (see Exhibit 5)
23.2	Consent of Mayer Hoffman McCann P.C.**
24	Powers of Attorney**

* Incorporated herein by reference to Amtech's Form DEF 14A, File No. 000-11412, filed with the SEC on April 24, 2007.

** Filed herewith.

Item 9. Undertakings.

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports

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filed with or furnished to the SEC by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser:

(i) If the Registrant is relying on Rule 430B under the Securities Act:

(A) Each prospectus filed by the Registrant pursuant to Rule 424(b)(3) under the Securities Act shall be deemed to be part of this registration statement as of the date the filed prospectus was deemed part of and included in this registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) under the Securities Act as part of this registration statement in reliance on Rule 430B under the Securities Act relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) under the Securities Act for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in this registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B under the Securities Act, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of this registration statement, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of this registration statement or made in a document incorporated or deemed incorporated by reference into this registration statement or prospectus that is part of this registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in this registration statement or prospectus that was part of this registration statement or made in any such document immediately prior to such effective date; or

(ii) If the Registrant is subject to Rule 430C under the Securities Act, each prospectus filed pursuant to Rule 424(b) under the Securities Act as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B under the Securities Act or other than prospectuses filed in reliance on Rule 430A under the Securities Act, shall be deemed to be part of and included in this registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of this registration statement or made in a document incorporated or deemed incorporated by reference into this registration statement or prospectus that is part of this registration statement will, as to a purchaser with a time of contract of sale

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prior to such first use, supersede or modify any statement that was made in this registration statement or prospectus that was part of this registration statement or made in any such document immediately prior to such date of first use.

(5) That, for the purpose of determining liability of the Registrant under the Securities Act to any purchaser in the initial distribution of the securities, in a primary offering of securities of the Registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the Registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the Registrant relating to the offering required to be filed pursuant to Rule 424 under the Securities Act;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the Registrant or used or referred to by the Registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the Registrant or its securities provided by or on behalf of the Registrant; and

(iv) Any other communication that is an offer in the offering made by the Registrant to the purchaser.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Tempe, State of Arizona, on August 15, 2007.

AMTECH SYSTEMS, INC.

By: /s/ Robert T. Hass
Name: Robert T. Hass
Title: Chief Accounting Officer, Assistant
Secretary and Assistant Treasurer

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
* _____ Jong S. Whang	Chairman of the Board, President and Chief Executive Officer	August 15, 2007
* _____ Robert T. Hass	Chief Accounting Officer, Assistant Secretary and Assistant Treasurer	August 15, 2007
* _____ Michael Garnreiter	Director	August 15, 2007

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<u>Signature</u>	<u>Title</u>	<u>Date</u>
* _____ Alfred W. Giese	Director	August 15, 2007
* _____ Brian Hoekstra	Director	August 15, 2007
* _____ Robert F. King	Director	August 15, 2007

* By: /s/ Robert T. Hass
Robert T. Hass, Attorney-In-Fact **

** By authority of the power of attorney filed as Exhibit 24 hereto.

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EXHIBIT INDEX

<u>Exhibit Number</u>	<u>Description</u>
4.1	2007 Employee Stock Incentive Plan*
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23.2	Consent of Mayer Hoffman McCann P.C.**
24	Powers of Attorney**

* Incorporated herein by reference to Amtech's Form DEF 14A, File No. 000-11412, filed with the SEC on April 24, 2007.

** Filed herewith.

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Form of Opinion of Counsel

August 15, 2007

Securities and Exchange Commission
450 Fifth Street, N.W.
Washington, D.C. 20549

Re: Amtech Systems, Inc.
2007 Employee Stock Incentive Plan

Ladies and Gentlemen:

We have acted as counsel to Amtech Systems, Inc., an Arizona corporation (the "Company"), in connection with its Registration Statement on Form S-8, filed on August 15, 2007 under the Securities Act of 1933, as amended (the "Act"), relating to the Company's registration of 500,000 shares of its Common Stock, \$.01 par value (the "Shares"), issuable pursuant to the Company's 2007 Employee Stock Incentive Plan (the "Plan").

In that connection, we have examined such documents, corporate records and other instruments as we have deemed necessary or appropriate for purposes of this opinion. For purposes of our opinion, we have assumed the availability of a sufficient number of authorized and unissued shares at the time of such issuance.

Based upon the foregoing, we are of the opinion that the Shares, when issued and sold in accordance with the terms of the Plan, will be legally issued, fully paid and nonassessable.

We hereby consent to the use of this opinion as an exhibit to the Registration Statement.

Very truly yours,

/s/ SQUIRE, SANDERS & DEMPSEY L.L.P.

SQUIRE, SANDERS & DEMPSEY L.L.P.

[On Mayer Hoffman McCann Letterhead]

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

As independent registered public accountants, we hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated December 21, 2006, relating to the consolidated financial statements of Amtech Systems, Inc. and subsidiaries as of September 30, 2006 and September 30, 2005 and the related consolidated statements of operations, stockholders' equity and comprehensive income (loss) and cash flows for the years then ended, included in the 2006 Annual Report on Form 10-K of Amtech Systems, Inc.

/s/ Mayer Hoffman McCann P.C.

Mayer Hoffman McCann P.C.

Phoenix, Arizona

August 15, 2007

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jong S. Whang and Robert T. Hass, and each of them, his true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution, for such person and in his name, place and stead, in any and all capacities, in connection with the registrant's registration statement on Form S-8 under the Securities Act of 1933, including to sign the registration statement in the name and on behalf of the undersigned as a director or officer of the registrant, and any and all amendments or supplements to the registration statement, including any and all stickers and post-effective amendments to the registration statement and to sign any and all additional registration statements relating to the same offering of securities as those that are covered by the registration statement that are filed pursuant to Rule 462(b) under the Securities Act of 1933, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission and any applicable securities exchange or securities self-regulatory body, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or his substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Jong S. Whang</u> Jong S. Whang	Chairman of the Board, President and Chief Executive Officer	August 13, 2007
<u>/s/ Robert T. Hass</u> Robert T. Hass	Chief Accounting Officer, Assistant Secretary and Assistant Treasurer	August 13, 2007
<u>/s/ Michael Garnreiter</u> Michael Garnreiter	Director	August 13, 2007
<u>/s/ Alfred W. Giese</u> Alfred W. Giese	Director	August 13, 2007
<u>/s/ Brian Hoekstra</u> Brian Hoekstra	Director	August 13, 2007
<u>/s/ Robert F. King</u> Robert F. King	Director	August 13, 2007
