

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G
Under the Securities Exchange Act of 1934
(Amendment No.)*

AMTECH SYSTEMS INC

(Name of Issuer)

Common Stock, \$ 0.01 par value

(Title of Class of Securities)

032332504

(CUSIP Number)

December 31, 2008

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d-1(b)

Rule 13d-1(c)

Rule 13d-1(d)

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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CUSIP No. 032332504

13G

1. Name of Reporting Person
I.R.S. Identification No. of above Person

THE GOLDMAN SACHS GROUP, INC.

2. Check the Appropriate Box if a Member of a Group

(a)

(b)

3. SEC Use Only

4. Citizenship or Place of Organization

Delaware

5. Sole Voting Power

Number of 0

Shares -----

6. Shared Voting Power

Beneficially

550,587

Owned by -----

Each

7. Sole Dispositive Power

Reporting

0

Person -----

With:

8. Shared Dispositive Power

550,587

9. Aggregate Amount Beneficially Owned by Each Reporting Person

550,587

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares

11. Percent of Class Represented by Amount in Row (9)

6.1 %

12. Type of Reporting Person

HC-CO

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CUSIP No. 032332504

13G

1. Name of Reporting Person

I.R.S. Identification No. of above Person

GOLDMAN, SACHS & CO.

2. Check the Appropriate Box if a Member of a Group

(a)

(b)

3. SEC Use Only

4. Citizenship or Place of Organization

New York

5. Sole Voting Power

Number of 0

Shares -----

6. Shared Voting Power

Beneficially

550,587

Owned by

Each 7. Sole Dispositive Power
Reporting 0
Person -----
 8. Shared Dispositive Power
With: 550,587

9. Aggregate Amount Beneficially Owned by Each Reporting Person

550,587

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares

[]

11. Percent of Class Represented by Amount in Row (9)

6.1 %

12. Type of Reporting Person

BD-PN-IA

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Item 1(a). Name of Issuer:
 AMTECH SYSTEMS INC

Item 1(b). Address of Issuer's Principal Executive Offices:
 131 S CLARK DR
 TEMPE, AZ 85281

Item 2(a). Name of Persons Filing:

 THE GOLDMAN SACHS GROUP, INC.
 GOLDMAN, SACHS & CO.

Item 2(b). Address of Principal Business Office or, if none, Residence:

 The Goldman Sachs Group, Inc.
 85 Broad Street
 New York, NY 10004

 Goldman, Sachs & Co.
 85 Broad Street
 New York, NY 10004

Item 2(c). Citizenship:
 THE GOLDMAN SACHS GROUP, INC. - Delaware
 GOLDMAN, SACHS & CO. - New York

Item 2(d). Title of Class of Securities:
 Common Stock, \$ 0.01 par value

Item 2(e). CUSIP Number:
 032332504

Item 3. If this statement is filed pursuant to Rules 13d-1(b) or
 13d-2(b) or (c), check whether the person filing is a:

(a).[X] Broker or dealer registered under Section 15 of the Act
 (15 U.S.C. 78o).
 Goldman, Sachs & Co.

(b).[] Bank as defined in Section 3(a)(6) of the Act
 (15 U.S.C. 78c).

(c).[] Insurance company as defined in Section 3(a)(19) of the Act

(15 U.S.C. 78c).

- (d). Investment company registered under Section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8).
- (e). An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E);
Goldman, Sachs & Co.
- (f). An employee benefit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii)(F);
- (g). A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G);
The Goldman Sachs Group, Inc.
- (h). A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i). A church plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j). Group, in accordance with Rule 13d-1(b)(1)(ii)(J).

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Item 4. Ownership.*

- (a). Amount beneficially owned:
See the response(s) to Item 9 on the attached cover page(s).
- (b). Percent of Class:
See the response(s) to Item 11 on the attached cover page(s).
- (c). Number of shares as to which such person has:
 - (i). Sole power to vote or to direct the vote: See the response(s) to Item 5 on the attached cover page(s).
 - (ii). Shared power to vote or to direct the vote: See the response(s) to Item 6 on the attached cover page(s).
 - (iii). Sole power to dispose or to direct the disposition of: See the response(s) to Item 7 on the attached cover page(s).
 - (iv). Shared power to dispose or to direct the disposition of: See the response(s) to Item 8 on the attached cover page(s).

Item 5. Ownership of Five Percent or Less of a Class.
Not Applicable

Item 6. Ownership of More than Five Percent on Behalf of Another Person.
Not Applicable

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company.
See Exhibit (99.2)

Item 8. Identification and Classification of Members of the Group.
Not Applicable

Item 9. Notice of Dissolution of Group.
Not Applicable

Item 10. Certification.
By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

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* In accordance with the Securities and Exchange Commission Release No. 34-39538 (January 12, 1998) (the "Release"), this filing reflects the securities

beneficially owned by certain operating units (collectively, the "Goldman Sachs Reporting Units") of The Goldman Sachs Group, Inc. and its subsidiaries and affiliates (collectively, "GSG"). This filing does not reflect securities, if any, beneficially owned by any operating units of GSG whose ownership of securities is disaggregated from that of the Goldman Sachs Reporting Units in accordance with the Release. The Goldman Sachs Reporting Units disclaim beneficial ownership of the securities beneficially owned by (i) any client accounts with respect to which the Goldman Sachs Reporting Units or their employees have voting or investment discretion, or both and (ii) certain investment entities of which the Goldman Sachs Reporting Units act as the general partner, managing general partner or other manager, to the extent interests in such entities are held by persons other than the Goldman Sachs Reporting Units.

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SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: February 02, 2009

THE GOLDMAN SACHS GROUP, INC.

By:/s/ Jeremy Kahn

Name: Jeremy Kahn
Title: Attorney-in-fact

GOLDMAN, SACHS & CO.

By:/s/ Jeremy Kahn

Name: Jeremy Kahn
Title: Attorney-in-fact

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INDEX TO EXHIBITS

Exhibit No.	Exhibit
99.1	Joint Filing Agreement
99.2	Item 7 Information
99.3	Power of Attorney, relating to THE GOLDMAN SACHS GROUP, INC.
99.4	Power of Attorney, relating to GOLDMAN, SACHS & CO.

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EXHIBIT (99.1)

JOINT FILING AGREEMENT

In accordance with Rule 13d-1(k)(1) promulgated under the Securities Exchange Act of 1934, the undersigned agree to the joint filing of a Statement on Schedule 13G (including any and all amendments thereto) with respect to the Common Stock, \$ 0.01 par value, of AMTECH SYSTEMS INC and further agree to the filing of this agreement as an Exhibit thereto. In addition, each party to this Agreement expressly authorizes each other party to this Agreement to file on its behalf any and all amendments to such Statement on Schedule 13G.

Date: February 02, 2009

THE GOLDMAN SACHS GROUP, INC.

By:/s/ Jeremy Kahn

Name: Jeremy Kahn

Title: Attorney-in-fact

GOLDMAN, SACHS & CO.

By: /s/ Jeremy Kahn

Name: Jeremy Kahn

Title: Attorney-in-fact

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EXHIBIT (99.2)

ITEM 7 INFORMATION

The securities being reported on by The Goldman Sachs Group, Inc. ("GS Group"), as a parent holding company, are owned, or may be deemed to be beneficially owned, by Goldman, Sachs & Co. ("Goldman Sachs"), a broker or dealer registered under Section 15 of the Act and an investment adviser registered under Section 203 of the Investment Advisers Act of 1940. Goldman Sachs is a direct and indirect wholly-owned subsidiary of GS Group.

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EXHIBIT (99.3)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS that THE GOLDMAN SACHS GROUP, INC. (the "Company") does hereby make, constitute and appoint each of Ronald L. Christopher, Dan Deluca and Jeremy Kahn (and any other employee of The Goldman Sachs Group, Inc. or one of its affiliates designated in writing by one of the attorneys-in-fact), acting individually, its true and lawful attorney, to execute and deliver in its name and on its behalf whether the Company is acting individually or as representative of others, any and all filings required to be made by the Company under the Securities Exchange Act of 1934, (as amended, the "Act"), with respect to securities which may be deemed to be beneficially owned by the Company under the Act, giving and granting unto each said attorney-in-fact power and authority to act in the premises as fully and to all intents and purposes as the Company might or could do if personally present by one of its authorized signatories, hereby ratifying and confirming all that said attorney-in-fact shall lawfully do or cause to be done by virtue hereof.

THIS POWER OF ATTORNEY shall remain in full force and effect until either revoked in writing by the undersigned or until such time as the person or persons to whom power of attorney has been hereby granted cease(s) to be an employee of The Goldman Sachs Group, Inc. or one of its affiliates.

IN WITNESS WHEREOF, the undersigned has duly subscribed these presents as of October 14, 2008.

THE GOLDMAN SACHS GROUP, INC.

By: /s/ Gregory K. Palm

Name: Gregory K. Palm

Title: Executive Vice President and General Counsel

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EXHIBIT (99.4)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS that GOLDMAN, SACHS & CO. (the "Company") does hereby make, constitute and appoint each of Ronald L. Christopher, Dan Deluca and Jeremy Kahn, (and any other employee of The Goldman Sachs Group, Inc. or one of its affiliates designated in writing by one of the attorneys-in-fact), acting individually, its true and lawful attorney, to execute and deliver in its name and on its behalf whether the Company is acting individually or as representative of others, any and all filings required to be made by the Company under the Securities Exchange Act of 1934, (as amended, the "Act"), with respect to securities which may be deemed to be beneficially owned by the Company under the Act, giving and granting unto each said attorney-in-fact power and authority to act in

the premises as fully and to all intents and purposes as the Company might or could do if personally present by one of its authorized signatories, hereby ratifying and confirming all that said attorney-in-fact shall lawfully do or cause to be done by virtue hereof.

THIS POWER OF ATTORNEY shall remain in full force and effect until either revoked in writing by the undersigned or until such time as the person or persons to whom power of attorney has been hereby granted cease(s) to be an employee of The Goldman Sachs Group, Inc. or one of its affiliates

IN WITNESS WHEREOF, the undersigned has duly subscribed these presents as of October 14, 2008.

GOLDMAN, SACHS & CO.

By: /s/ Gregory K. Palm

Name: Gregory K. Palm
Title: Managing Director