

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

SCHEDULE 13G
(RULE 13D-102)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO RULES 13D-1(B),
(C) AND (D) AND AMENDMENTS THERETO FILED PURSUANT TO RULE 13D-2(B)

(AMENDMENT NO. 2)1

MERCURY COMPUTER SYSTEMS, INC.

(Name of Issuer)

Common Stock, \$0.01 par value per share

(Title or Class of Securities)

589378-10-8

(CUSIP Number)

December 31, 2000

(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)

1 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).

CUSIP No. 589378-10-8

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1 NAMES OF REPORTING PERSONS
S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS

Memorial Drive Trust #04-2272266 Plan #001

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP
(SEE INSTRUCTIONS)

N/A

(A)

(B)

3 SEC USE ONLY

4 CITIZENSHIP OF PLACE OR ORGANIZATION

Massachusetts

5 SOLE VOTING POWER

NUMBER OF

698,500

SHARES
BENEFICIALLY

6 SHARED VOTING POWER

OWNED BY

0

EACH
REPORTING
PERSON

7

SOLE DISPOSITIVE POWER

698,500

WITH

8

SHARED DISPOSITIVE POWER

0

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

698,500

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES
(SEE INSTRUCTIONS)

N/A

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

3.25%

12 TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

EP

ITEM 1(A). NAME OF ISSUER:
Mercury Computer Systems, Inc.

ITEM 1(B). ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES:
199 Riverneck Road
Chelmsford, MA 01824-2820

ITEM 2(A). NAME OF PERSON FILING:
Memorial Drive Trust ("MDT")

ITEM 2(B). ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE:
125 CambridgePark Drive
6th Floor
Cambridge, MA 02140

ITEM 2(C). PLACE OF ORGANIZATION:
Massachusetts

ITEM 2(D). TITLE OF CLASS OF SECURITIES:
Common Stock, \$0.01 par value

ITEM 2(E). CUSIP NUMBER:
589378-10-8

ITEM 3. IF THIS STATEMENT IS FILED PURSUANT TO RULES 13D-1(B), OR 13D-2(B), CHECK WHETHER THE PERSON FILING IS A:

- (A) Broker or dealer registered under Section 15 of the Act.
- (B) Bank as defined in Section 3(a)(6) of the Act.
- (C) Insurance Company as defined in Section 3(a)(19) of the Act.
- (D) Investment Company registered under Section 8 of the Investment Company Act.
- (E) Investment Adviser registered under Section 203 of the Investment Advisers Act of 1940.
- (F) Employee Benefit Plan, Pension Fund which is subject to the provisions of the Employee Retirement Income Security Act of 1974 or Endowment Fund; see 13d-1(b)(1)(ii)(F).
- (G) Parent Holding Company, in accordance with Rule 13d-1(b) (1)(ii)(G); see Item 7.
- (H) Group, in accordance with Rule 13d-1(b)(1)(ii)(H).

ITEM 4. OWNERSHIP:

- (a) Amount beneficially owned: 698,500 shares
- (b) Percent of class: 3.25%
- (c) Number of shares as to which such person has:
 - (i) Sole Power to vote or to direct the vote: 698,500 shares
 - (ii) Shared power to vote or to direct the vote: None
 - (iii) Sole power to dispose or to direct the disposition of: 698,500 shares
 - (iv) Shared power to dispose or to direct the disposition of: None

ITEM 5. OWNERSHIP OF FIVE PERCENT OR LESS OF A CLASS:

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following.

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:

Not applicable.

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 in the ordinary course of business and were not acquired for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired in connection with or as a participant in any transaction having such purposes or effect.

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.

February 12, 2001

(Date)

MEMORIAL DRIVE TRUST

By: /s/ R. Schorr Berman

R. Schorr Berman
Administrator and
Chief Executive Officer