

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. \_\_)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, 1998

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(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).

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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 SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH		2,060,686
	6	SHARED VOTING POWER
		0
	7	SOLE DISPOSITIVE POWER
		2,060,686
	8	SHARED DISPOSITIVE POWER
		0
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	
	2,060,686	
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)	
	20.38%	
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: 2,060,686 shares
- (b) Percent of class: 20.38%
- (c) Number of shares as to which such person has:
  - (i) Sole Power to vote or to direct the vote: 2,060,686 shares
  - (ii) Shared power to vote or to direct the vote: None
  - (iii) Sole power to dispose or to direct the disposition of: 2,060,686 shares
  - (iv) Shared power to dispose or to direct the disposition of: None

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:

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 9, 1999

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(Date)

MEMORIAL DRIVE TRUST

By: /s/ R. Schorr Berman

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R. Schorr Berman  
Administrator and  
Chief Executive Officer