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OMB APPROVAL  
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U.S. SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 3

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934,  
Section 17(a) of the Public Utility Holding Company Act of 1935 or  
Section 30(f) of the Investment Company Act of 1940

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1. Name and Address of Reporting Person

Memorial Drive Trust

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(Last) (First) (Middle)

c/o MDT Advisers, 125 CambridgePark Drive

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(Street)

Cambridge, MA 02140

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(City) (State) (Zip)

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2. Date of Event Requiring Statement (Month/Day/Year)

1/29/98

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3. IRS or Social Security Number of Reporting Person (Voluntary)

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4. Issuer Name and Ticker or Trading Symbol

Mercury Computer Systems, Inc. MRCY

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5 Relationship of Reporting Person to Issuer  
(Check all applicable)

[ ] Director [ X ] 10% Owner  
[ ] Officer (give title below) [ ] Other (specify below)

Director of the Medical Business Group  
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6. If Amendment, Date of Original (Month/Year)

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Table I -- Non-Derivative Securities Beneficially Owned  
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1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr.5)
Common Stock	842,876	D	
Preferred Stock	2,036,910	D	
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Reminder: Report on a separate line for each class of securities beneficially  
owned directly or indirectly.

(Print or Type Responses)

Table II -- Derivative Securities Beneficially Owned  
(e.g., puts, calls, warrants, options, convertible securities)

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1. Title of Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)	3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)	4. Conver- sion or Exercise Price of Derivative Security	5. Owner- ship Form of Derivative Security: Direct (D) or Indirect (I) (Instr.5)	7. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exer- cisable	Expira- tion Date	Amount or Number of Shares		

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None

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Explanation of Responses:

Memorial Drive Trust

By: \_\_\_\_\_ 1/29/98  
\*Signature of Reporting Person Date

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal  
Violations.  
See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed.  
If space provided is insufficient. See Instruction 6 for procedure.

