

<b>OMB APPROVAL</b>	
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**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

<b>1. Name and Address of Reporting Person*</b> <u>BATY GORDON</u> _____ (Last) (First) (Middle) <u>11 CASTLE ROAD</u> _____ (Street) <u>LEXINGTON MA 02420</u> _____ (City) (State) (Zip)			<b>2. Issuer Name and Ticker or Trading Symbol</b> <u>MERCURY COMPUTER SYSTEMS INC</u> [ <u>MRCY</u> ]		<b>5. Relationship of Reporting Person(s) to Issuer</b> (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner Officer (give title below) Other (specify below)	
			<b>3. Date of Earliest Transaction (Month/Day/Year)</b> <u>05/05/2004</u>			
			<b>4. If Amendment, Date of Original Filed (Month/Day/Year)</b>		<b>6. Individual or Joint/Group Filing (Check Applicable Line)</b> <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person	

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	05/05/2004		M		3,658	A	\$2	37,137	D	
Common Stock	05/05/2004		M		3,624	A	\$2	40,761	D	
Common Stock	05/05/2004		M		2,362	A	\$2	43,123	D	
Common Stock	05/05/2004		M		4,812	A	\$4	47,935	D	
Common Stock	05/05/2004		M		9,974	A	\$7.813	57,909	D	

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date					
Stock Option (Right to Buy)	\$2	05/05/2004		M			3,658	07/30/1996	07/30/2006	Common Stock 3,658	\$0 <sup>(1)</sup>	0	D	
Stock Option (Right to Buy)	\$2	05/05/2004		M			3,624	07/30/1996	07/30/2006	Common Stock 3,624	\$0 <sup>(1)</sup>	0	D	
Stock Option (Right to Buy)	\$2	05/05/2004		M			2,362	03/30/1997	09/30/2007	Common Stock 2,362	\$0 <sup>(1)</sup>	0	D	
Stock Option (Right to Buy)	\$4	05/05/2004		M			4,812	10/20/1997	10/20/2007	Common Stock 4,812	\$0 <sup>(1)</sup>	0	D	
Stock Option (Right to Buy)	\$7.813	05/05/2004		M			9,974	09/30/2001	09/30/2008	Common Stock 9,974	\$0 <sup>(1)</sup>	0	D	

**Explanation of Responses:**

1. Field N/A to this transaction but was completed to allow for electronic filing only.

Joseph M. Hartnett, Attorney-in-fact 05/07/2004

\*\* Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

\*\* 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 is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.