

MERCURY COMPUTER SYSTEMS INC  
 Form 4  
 August 17, 2005

**FORM 4**

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

OMB APPROVAL

OMB Number: 3235-0287  
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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

**STATEMENT OF CHANGES IN 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(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person \*  
**ISENSTEIN BARRY S**

2. Issuer Name and Ticker or Trading Symbol  
**MERCURY COMPUTER SYSTEMS INC [MRCY]**

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

(Last) (First) (Middle)  
**93 WOODBINE ROAD**  
 (Street)

3. Date of Earliest Transaction (Month/Day/Year)  
**08/16/2005**

\_\_\_\_ Director \_\_\_\_\_ 10% Owner  
 Officer (give title below) \_\_\_\_\_ Other (specify below)  
 VP Defense Electronics Group

**CARLISLE, MA 01741**  
 (City) (State) (Zip)

4. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)  
 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)
Common Stock	08/16/2005		S <sup>(1)</sup>	1,000 D	\$ 26.52 30,804	I	By The Isenstein Family Investment Trust
Common Stock					6,598 <sup>(2)</sup>	D	

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

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SEC 1474 (9-02)

displays a currently valid OMB control number.

**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 Underlying Securities (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of Derivative Securities Beneficially Owned (Instr. 5)
				Code	V (A) (D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
ISENSTEIN BARRY S 93 WOODBINE ROAD CARLISLE, MA 01741			VP Defense Electronics Group	

## Signatures

Robert E. Hult, 08/17/2005  
Attorney-in-fact

\_\_Signature of Reporting Person Date

## Explanation of Responses:

- \* 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).
- (1) The sale reported on this Form 4 was effected pursuant to a Rule 10b5-1 trading plan adopted by Mr. Isenstein on December 15, 2004.
- (2) These shares include 6,598 shares related to restricted stock awards granted on August 12, 2005.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.