

Kraus Scott William
 Form 4/A
 August 18, 2010

FORM 4

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

OMB APPROVAL

OMB Number: 3235-0287
 Expires: January 31, 2005
 Estimated average burden hours per response... 0.5

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 *
 Kraus Scott William

(Last) (First) (Middle)
 1175 SEATON ROSS ROAD
 (Street)

WAYNE, PA 19087

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol
 Cardiovascular Systems Inc [CSII]

3. Date of Earliest Transaction
 (Month/Day/Year)
 08/13/2010

4. If Amendment, Date Original Filed(Month/Day/Year)
 08/17/2010

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

___ Director ___ 10% Owner
 ___X___ Officer (give title below) ___ Other (specify below)
 VP Sales

6. Individual or Joint/Group Filing(Check Applicable Line)
 ___X___ 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 Ownership (Instr. 4) | | |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|--|-----------------------------------|--------|---|
| | | | | (A) or (D) | Price | | | | |
| | | | | Code | V | Amount | (D) | Price | |
| Common Stock | 08/13/2010 | | A | | 31,793 | A | \$ 0 | 88,703 | D |

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

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 control number.

SEC 1474 (9-02)

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

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| 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 Owned Following Reporting Transaction (Instr. 6) |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--|---|
| | | | | 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 |
| Kraus Scott William 1175 SEATON ROSS ROAD WAYNE, PA 19087 | | | VP Sales | |

Signatures

/s/ John R. Remakel as Attorney-in-Fact for Scott W. Kraus pursuant to Power of Attorney previously filed.

08/18/2010

__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).

Remarks:

This Form 4/A is being filed solely for the purpose of correcting a clerical data entry error to reflect that the shares were acquired.

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.