

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

| OMB APPROVAL | |
|----------------------------------------------|-----------|
| OMB Number: | 3235-0287 |
| Estimated average burden hours per response: | 0.5 |

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Name and Address of Reporting Person* <u>Hooven Michael D</u> (Last) (First) (Middle) 7778 BENNINGTON DR (Street) CINCINNATI OH 45241 (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol <u>AtriCure, Inc. [ATRC]</u> | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner Officer (give title below) Other (specify below) |
| | 3. Date of Earliest Transaction (Month/Day/Year) 09/11/2012 | |
| | 4. If Amendment, Date of Original Filed (Month/Day/Year) | 6. Individual or Joint/Group Filing (Check Applicable Line) <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 | 09/11/2012 | | P | | 100 | A | \$7.14 | 66,199 | D | |
| Common Stock | 09/11/2012 | | P | | 301 | A | \$7.15 | 66,500 | D | |
| Common Stock | 09/11/2012 | | P | | 744 | A | \$7.2 | 67,244 | D | |
| Common Stock | | | | | | | | 1,121 | I | Held by Son ⁽¹⁾ |
| Common Stock | | | | | | | | 334,211 | I | Michael D. Hooven 2004 Trust FBO Michael ⁽²⁾ |
| Common Stock | | | | | | | | 334,211 | I | Michael D. Hooven 2001 Trust FBO Susan ⁽³⁾ |
| Common Stock | | | | | | | | 18,421 | I | Susan Spies 2004 Children's Trust ⁽⁴⁾ |

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 | | | | | |

Explanation of Responses:

- The Reporting Person disclaims beneficial ownership of these securities.
- Held by Michael D. Hooven 2004 Trust FBO Michael. Mr. Hooven disclaims beneficial ownership of these securities, except as to his pecuniary interest therein.
- Held by Michael D. Hooven 2004 Trust FBO Susan. Mr. Hooven disclaims beneficial ownership of these securities, except as to his pecuniary interest therein.
- Held by Susan Spies 2004 Children's Trust. These shares are held in trust for the benefit of the Reporting Person's son. Reporting person is the trustee of that trust. Mr. Hooven disclaims beneficial ownership of these securities, except as to his pecuniary interest therein.

/s/ Michael D. Hooven

09/12/2012

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.