

IONATRON, INC.  
Form 4  
January 31, 2007

**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 \*  
**HAYDEN JOSEPH**  
  
(Last) (First) (Middle)  
  
**IONATRON, INC., 3716 E.  
COLUMBIA STREET - SUITE 120**  
  
(Street)  
  
**TUCSON, AZ 85714**  
  
(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol  
**IONATRON, INC. [IOTN]**  
  
3. Date of Earliest Transaction (Month/Day/Year)  
**01/29/2007**  
  
4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer  
  
(Check all applicable)  
  
 Director  10% Owner  
 Officer (give title below)  Other (specify below)  
**Executive VP Programs**  
  
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 Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|--|-----------------------------------|
|                                 |                                      |  | Code                           | V   | Amount  | (A) or (D)   | Price                             |
| Common Stock                    | 01/29/2007                           |  | S <sup>(1)</sup>               |   | 2,240   | D  | \$ 5.2901                         |
| Common Stock                    | 01/30/2007                           |  | S <sup>(1)</sup>               |   | 37,760  | D  | \$ 5.2111                         |
| Common Stock                    | 01/30/2007                           |  | S <sup>(1)</sup>               |   | 8,000   | D  | \$ 5.2001                         |
|                                 |                                      |  |                                |   |   |  | \$ 6,021,428                      |
|                                 |                                      |  |                                |   |   |  | \$ 5,983,668                      |
|                                 |                                      |  |                                |   |   |  | \$ 5,975,668                      |

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

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SEC 1474 (9-02)

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. 6) |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--|--|
|  |  |                                      |  |                                |   |  |   |  |  |

## Reporting Owners

**Reporting Owner Name / Address**

**Relationships**

Director    10% Owner    Officer    Other

HAYDEN JOSEPH  
IONATRON, INC.  
3716 E. COLUMBIA STREET - SUITE 120  
TUCSON, AZ 85714

Executive VP Programs

## Signatures

/s/ Hayden Joseph    01/31/2007

\*\*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).

This sale was made pursuant to a trading plan previously entered into by the reporting person and complies with the requirements of Rule (1) 10b5-1(c)(1) under the Securities Exchange Act of 1934, as amended. The reporting person terminated the 10b5-1 plan after the close of trading on January 31, 2007.

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.