

FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

OMB APPROVAL

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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

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

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

(Print or Type Responses)

| | | | | | |
|--|--|---|--|--|--|
| 1. Name and Address of Reporting Person* KISPERT JOHN H | | 2. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC] | | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director _____ 10% Owner _____ <input checked="" type="checkbox"/> Officer (give title below) _____ Other (specify below) _____ Chief Financial Officer | |
| (Last) (First) (Middle) C/O KLA-TENCOR CORPORATION, 160 RIO ROBLES | | 3. Date of Earliest Transaction (Month/Day/Year) 09/26/2005 | | | |
| (Street) SAN JOSE, CA 95130 | | 4. If Amendment, Date Original Filed(Month/Day/Year) | | 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person | |
| (City) (State) (Zip) | | 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 | | | | | | | | 6,681 | I | by Trust |
| Common Stock-Restricted Stock Units (1) | | | | | | | | 48,333 | D | |

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

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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 Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
|--|--|--------------------------------------|--|--------------------------------|---|---|-----|--|-----------------|---|----------------------------|--|--|--|--|
| | | | | Code | V | (A) | (D) | Date Exercisable | Expiration Date | Title | Amount or Number of Shares | | | | |
| Non-Qualified Stock Option (right to buy) | \$ 47.95 | 09/26/2005 | | A | | 75,000 | | 09/26/2006 | 09/26/2012 | Common Stock | 75,000 | \$ 0 | 75,000 | D | |
| Non-Qualified Stock Option (right to buy) | \$ 26.25 | | | | | | | 11/10/2001 | 11/10/2010 | Common Stock | 1,000 | | 1,000 | D | |
| Non-Qualified Stock Option (right to buy) | \$ 29.31 | | | | | | | 10/02/2002 | 10/02/2011 | Common Stock | 14,000 | | 14,000 | D | |
| Non-Qualified Stock Option (right to buy) | \$ 32.75 | | | | | | | 04/04/2002 | 04/04/2011 | Common Stock | 2,667 | | 2,667 | D | |

| | | | | | | | | | | | | | | |
|---|------------|--|--|--|--|--|--|------------|------------|--------------|--------|--|--------|---|
| Non-Qualified Stock Option (right to buy) | \$ 34.67 | | | | | | | 11/08/2003 | 01/28/2013 | Common Stock | 11,250 | | 11,250 | D |
| Non-Qualified Stock Option (right to buy) | \$ 37.05 | | | | | | | 11/08/2003 | 11/08/2012 | Common Stock | 5,625 | | 5,625 | D |
| Non-Qualified Stock Option (right to buy) | \$ 40.66 | | | | | | | 10/27/2004 | 08/02/2014 | Common Stock | 11,250 | | 11,250 | D |
| Non-Qualified Stock Option (right to buy) | \$ 41.79 | | | | | | | 09/21/2005 | 09/21/2014 | Common Stock | 75,000 | | 75,000 | D |
| Non-Qualified Stock Option (right to buy) | \$ 44.6875 | | | | | | | 08/13/2001 | 08/13/2010 | Common Stock | 8,658 | | 8,658 | D |
| Non-Qualified Stock Option (right to buy) | \$ 45.16 | | | | | | | 10/27/2004 | 04/26/2014 | Common Stock | 18,750 | | 18,750 | D |
| Non-Qualified Stock Option (right to buy) | \$ 51.229 | | | | | | | 11/08/2003 | 07/30/2013 | Common Stock | 12,500 | | 12,500 | D |
| Non-Qualified Stock Option (right to buy) | \$ 53.86 | | | | | | | 10/27/2004 | 10/27/2013 | Common Stock | 30,000 | | 30,000 | D |
| Non-Qualified Stock Option (right to buy) | \$ 58.10 | | | | | | | 10/27/2004 | 01/27/2014 | Common Stock | 15,000 | | 15,000 | D |

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|--|---------------|-----------|-------------------------|-------|
| | Director | 10% Owner | Officer | Other |
| KISPERT JOHN H C/O KLA-TENCOR CORPORATION 160 RIO ROBLES SAN JOSE, CA 95130 | | | Chief Financial Officer | |

Signatures

| | |
|--|------------|
| By: Stuart J. Nichols For: John H. Kispert | 09/27/2005 |
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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) Each restricted stock unit represents a contingent right to receive one share of KLAC common stock.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.

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