

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20594

SCHEDULE 13G

Under the Securities Exchange Act of 1934

(Amendment No.)*

KLA -Tencor Corporation

(Name of Issuer)

Common Stock

(Title of Class of Securities)

482480100

(CUSIP Number)

Check the following box if a fee is being paid with this statement []. (A fee is not required only if the filing person: (1) has a previous statement on file reporting beneficial ownership of more than five percent of the class of securities described in Item 1: and (2) has filed no amendment subsequent thereto reporting beneficial ownership of five percent or less of such class.) (See Rule 13d-7).

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

1 NAME OF REPORTING PERSON
S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON
Capital Research and Management Company
95-1411037

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a)
(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION
Delaware

5 SOLE VOTING POWER
NONE

NUMBER OF
SHARES
6 SHARED VOTING POWER
NONE

BENEFICIAALLY OWNED BY
EACH REPORTING
PERSON WITH
7 SOLE DISPOSITIVE POWER
7,245,000

8 SHARED DISPOSITIVE POWER
NONE

9 AGGREGATE AMOUNT BENEFICIAALLY OWNED BY EACH REPORTING PERSON
7,245,000 Beneficial ownership disclaimed pursuant to Rule 13d-4

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9
8.1%

12 TYPE OF REPORTING PERSON*
IA

*SEE INSTRUCTION BEFORE FILLING OUT

Schedule 13G
Under the Securities Exchange Act of 1934

Amendment No.

Item 1(a) Name of Issuer:
KLA -Tencor Corporation

Item 1(b) Address of Issuer's Principal Executive Offices:
160 Rio Robles
San Jose, CA 95134

Item 2(a) Name of Person(s) Filing:
Capital Research and Management Company

Item 2(b) Address of Principal Business Office:
333 South Hope Street
Los Angeles, CA 90071

Item 2(c) Citizenship: N/A

Item 2(d) Title of Class of Securities:
Common Stock

Item 2(e) CUSIP Number:
482480100

Item 3 The person(s) filing is(are):

(e) Investment Adviser registered under Section 203 of the
Investment Advisers Act of 1940.

Item 4 Ownership

Capital Research and Management Company, an investment adviser registered under Section 203 of the Investment Advisers Act of 1940 is deemed to be the beneficial owner of 7,245,000 shares or 8.1% of the 89,949,000 shares of Common Stock believed to be outstanding as a result of acting as investment adviser to various investment companies registered under Section 8 of the Investment Company Act of 1940.

Item 5 Ownership of 5% or Less of a Class: []

Item 6 Ownership of More than 5% on Behalf of Another Person: N/A

Item 7 Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company: N/A

Item 8 Identification and Classification of Members of the Group: N/A

Item 9 Notice of Dissolution of the Group: N/A

Item 10 Certification

CUSIP: 482480100

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By signing below, I certify that, to the best of my knowledge and belief, the securities referred to above were acquired in the ordinary course of business and were not acquired for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired in connection with or as a participant in any transaction having such purpose or effect.

Signature

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: February 10, 2000 (For the period ended
December 31, 1999)

Signature: *Paul G. Haaga, Jr.

Name/Title: Paul G. Haaga, Jr., Executive Vice
President

Capital Research and Management Company

*By

James P. Ryan
Attorney-in-fact

Signed pursuant to a Power of Attorney dated January 18,
2000 included as an Exhibit to Schedule 13G filed with the
Securities and Exchange Commission by Capital Research and
Management Company on February 10, 2000 with respect to 3COM
Corporation