SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K/A

(Mark One)

AMENDMENT NO. 1
TO

/X/   ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES
         EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR ENDED JUNE 30, 1994

                              OR

/ /   TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES
         EXCHANGE ACT OF 1934 [NO FEE REQUIRED]

         For the transition period from   to
                                       ----------------   ----------------
                 Commission file number 0-9992

                 KLA INSTRUMENTS CORPORATION
         (Exact name of registrant as specified in its charter)

          Delaware   04-2564110
   (State or other jurisdiction of   (IRS employer
   incorporation or organization)   identification no.)

                       160 Rio Robles
                 San Jose, California 95134
         (Address of principal executive offices) (Zip code)

Registrant's telephone number, including area code: (408) 434-4200
Securities registered pursuant to Section 12(b) of the Act: None
Securities registered pursuant to Section 12(g) of the Act:
                              Common Stock, $.001 par value
                              Common Stock Purchase Rights

     Indicate by check mark whether the registrant (1) has filed all reports
required to be filed by Section 13 or 15(d) of the Securities Exchange Act of
1934 during the preceding 12 months (or for such shorter period that the
registrant was required to file such reports), and (2) has been subject to such
filing requirements for the past 90 days.

Yes /X/   No
     ----   ----

     Indicate by check mark if disclosure of delinquent filers pursuant to Item
405 of Regulation S-K is not contained herein, and will not be contained, to
the best of registrant's knowledge, in definitive proxy or information
statements incorporated by reference in Part III of this Form 10-K or any
amendment to this Form 10-K. / /

     The aggregate market value of the voting stock held by non-affiliates of
the Registrant based upon the average bid and asked prices of the registrant's
stock, as of August 31, 1994, was $994,164,000. Shares of common stock held by
each officer and director and by each person or group who owns 5% or more of
the outstanding common stock have been excluded in that such persons or groups
may be deemed to be affiliates. This determination of affiliate status is not
necessarily a conclusive determination for other purposes.

     The registrant had 22,974,230 shares of Common Stock outstanding as of
August 31, 1994.

              THIS AMENDMENT 10-K/A CONTAINS 4 PAGES.

                       FORM 10-K/A

                     AMENDMENT NO. 1

     The undersigned registrant hereby amends Part IV, Item 14. EXHIBITS,
FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K, by filing herewith
Exhibit 27, 1994 Year End Financial Data Schedule.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this amendment to be signed on its behalf by the undersigned, thereunto duly authorized.

KLA INSTRUMENTS CORPORATION

By: /s/ William Turner

    William Turner
    Vice President/Corporate Controller

Date: December 15, 1994

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THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM THE
CONSOLIDATED STATEMENT OF OPERATIONS, THE CONSOLIDATED BALANCE SHEET AND THE
ACCOMPANYING NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AND IS QUALIFIED
IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS.
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