



APA OPTICS, INC.

1997 STOCK COMPENSATION PLAN

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APA OPTICS, INC.

1997 STOCK COMPENSATION PLAN

1. Purpose; Definitions.

The purpose of the APA Optics, Inc. 1997 Stock Compensation Plan (the "Plan") is to enable APA Optics, Inc. (the "Company"), and its Parents, Subsidiaries, and Affiliates, to attract, retain, and reward employees and to strengthen the mutuality of interests between such employees and the Company's shareholders, by offering such employees stock options and/or other equity-based incentives.

In addition to definitions that may be contained elsewhere in this Plan, for purposes of the Plan, the following terms shall be defined as set forth below:

(a) "Affiliate" means any entity other than the Company and its Parents and Subsidiaries that is designated by the Board as a participating employer under the Plan, provided that the Company directly or indirectly owns at least 20% of the combined voting power of all classes of stock of such entity or at least 20% of the ownership interests in such entity.

(b) "Award" means any Option, Stock Appreciation Right, or Other Stock-Based Award, or any other right, interest, or option relating to Stock or other securities of the Company granted pursuant to the provisions of this Plan.

(c) "Award Agreement" means any written agreement, contract or other instrument or document evidencing any Award granted by the Committee hereunder and signed by both the Company and the Participant.

(d) "Board" means the Board of Directors of the Company.

(e) "Code" means the Internal Revenue Code of 1986, as amended from time to time, and any successor

thereto.

(f) "Committee" means the Committee referred to in Section 2 of the Plan. If at any time no Committee shall be in office, then the functions of the Committee specified in the Plan shall be exercised by the Board. Where the Board has retained administrative authority with respect to the Plan, references herein to the "Committee" shall refer to the Board.

(g) "Company" means APA Optics, Inc., a corporation organized under the laws of the State of Minnesota, or any successor corporation.

(h) "Disability" means disability as determined under procedures established by the Committee for purposes of this Plan or, as applied to Incentive Stock Options, as defined in Section 22(e)(3) of the Code.

(i) "Exchange Act" means the Securities Exchange Act of 1934, as amended from time to time.

(j) "Fair Market Value" means as of any given date, unless otherwise determined by the Committee in good faith, the closing bid price of the Stock as reported on The Nasdaq Small-Cap Market or, if the Stock is then traded on The Nasdaq National Market or a national or regional securities exchange, the closing price of the Stock on The Nasdaq National Market or such exchange.

(k) "Incentive Stock Option" means any Stock Option intended to be and designated as an "Incentive Stock Option" within the meaning of Section 422 of the Code.

(l) "Nonqualified Stock Option" means any Stock Option that is not an Incentive Stock Option.

(m) "Other Stock-Based Award" means an Award under Section 7 below that is valued in whole or in part by reference to, or is otherwise based on, Stock.

(n) "Parent" means any corporation (other than the Company) in an unbroken chain of corporations ending with the Company if, at the time of granting of an Award, each of the corporations other than the Company owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in the chain.

(o) "Participant" means any person who is selected by the Committee to receive an Award under the Plan.

(p) "Plan" means this APA Optics, Inc. 1997 Stock Compensation Plan, as hereafter amended from time to time.

(q) "Stock" means the Common Stock, \$.01 par value per share, of the Company.

(r) "Stock Appreciation Right" or "SAR" means the right to receive a payment in cash or Stock as determined by the Committee.

(s) "Stock Option" or "Option" means any option to purchase shares of Stock granted pursuant to Section 5 below.

(t) "Subsidiary" means any corporation (other than the Company) in an unbroken chain of corporations beginning with the Company if, at the time of the granting of an Award, each of the corporations other than the last corporation in the unbroken chain owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in the chain.

[In addition, the term "Change in Control" shall have the meaning set forth in Section 8(b) below.]

The Plan shall be administered by a Committee of not fewer than two members of the Board, who shall be appointed by the Board and serve at the pleasure of the Board. The functions of the Committee specified in the Plan shall be exercised by the Board, if and to the extent that no Committee exists that has the authority to so administer the Plan, or to the extent that the Board retains authority to administer the Plan under specified circumstances. As to the selection of and grants of Awards to persons who are not subject to Sections 16(a) and 16(b) of the Exchange Act, the Committee may delegate any or all of its responsibilities to members of the Company's administration. The grants of Awards and determination of the terms thereof to persons who are subject to Sections 16(a) and 16(b) of the Exchange Act shall be made in a manner that satisfies the requirements of Rule 16b-3 under the Exchange Act, or any successor rule.

The Committee shall have full power and authority, consistent with the provisions of the Plan and subject to such orders or resolutions not inconsistent with the provisions of the Plan as may be adopted by the Board:

(a) to select the employees of the Company and any Parent, Subsidiary, or Affiliate to whom Awards may from time to time be granted hereunder;

(b) to determine the type or types of Awards to be granted to employees hereunder;

(c) to determine the number of shares of Stock to be covered by each Award granted hereunder:

(d) to determine the terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder;

(e) to determine whether, to what extent, and under what circumstances an Award may be settled in cash, Stock or other property or canceled or suspended;

(f) to determine whether, to what extent, and under what circumstances cash, Stock, and other property and other amounts payable with respect to an Award shall be deferred either automatically or at the election of the Participant;

(g) to interpret and administer the Plan and any instrument or agreement entered into thereunder;

(h) to establish such rules and regulations and appoint such agents as it shall deem appropriate for proper administration of the Plan; and

(i) to make any other determination and take any other action that the Committee deems necessary or desirable for administration of the Plan.

Members of the Board and of the Committee acting under the Plan shall be fully protected in relying in good faith upon the advice of counsel and shall incur no liability except for gross negligence or willful misconduct in the performance of their duties.

Decisions of the Committee shall be made in the Committee's sole discretion and shall be final, conclusive, and binding on all persons, including the Company, any Participant, any shareholder, and any employee of the Company or any Parent, Subsidiary, or Affiliate.

### 3. Stock Subject to Plan.

The total number of shares of Stock reserved and available for distribution under the Plan shall be 500,000 shares of Stock. Such shares may consist, in whole or in part, of authorized and unissued shares or treasury shares.

Subject to the possible adjustments described in the last paragraph of this Section 3, the total number of shares of Stock reserved and authorized for issuance upon exercise of Incentive Stock Options shall be 500,000. To the extent that such shares are not used for Incentive Stock Options, they shall be available for other Awards to

be granted under the Plan.

If any shares of Stock subject to an Award are not issued to a Participant because an Option or SAR is not exercised or an Award is otherwise forfeited or any such Award otherwise terminates without a payment being made to the Participant in the form of Stock, such shares shall again be available for distribution in connection with future Awards under the Plan.

In the event of any merger, reorganization, consolidation, recapitalization, Stock dividend, Stock split, or other change in corporate structure affecting the Stock, such substitution or adjustment shall be made in the aggregate number of shares reserved for issuance under the Plan, in the number and option price of shares subject to outstanding Options granted under the Plan, and in the number of shares subject to other outstanding Awards granted under the Plan as may be determined to be appropriate by the Board, in its sole discretion, provided that the number of shares subject to any Award shall always be a whole number. Any such adjusted option price shall also be used to determine the amount payable by the Company upon the exercise of any Stock Appreciation Right associated with any Stock Option.

#### 4. Eligibility.

Officers, management, or highly compensated employees of the Company and any Subsidiary, Parent, or Affiliate who are employed at the Company's Aberdeen, South Dakota, facility are eligible to be granted Awards under the Plan. The Committee shall have the exclusive authority to determine what constitutes management or a "highly compensated employee" and in making such a determination shall take into consideration guidelines established by the Department of Labor and court decisions as to what constitutes a "select group of management or highly compensated employees."

#### 5. Stock Options.

Stock Options may be granted alone, in addition to, or in tandem with other Awards granted under the Plan. Any Stock Option granted under the Plan shall be in such form as the Committee may from time to time approve.

Stock Options granted under the Plan may be of two types: (i) Incentive Stock Options and (ii) Nonqualified Stock Options. Options may be issued with or without Stock Appreciation Rights.

Options granted under the Plan shall be subject to the following terms and conditions and shall contain such additional terms and conditions, not inconsistent with the terms of the Plan, as the Committee shall deem desirable:

(a) Exercise Price. Except as provided in Section 5(i), the exercise price per share of Stock purchasable under a Stock Option shall be determined by the Committee at the time of grant but shall be not less than 85% of the Fair Market Value of the Stock on the date of grant.

(b) Option Term. Except as provided in Section 5(i) hereof, the term of each Stock Option shall be fixed by the Committee.

(c) Exercisability. Stock Options shall be exercisable at such time or times and subject to such terms and conditions as shall be determined by the Committee at or after grant; provided, however, that, except as provided in Sections 5(f), (g), and (h) and Section 8, unless otherwise determined by the Committee at or after grant, no Stock Option shall be exercisable prior to the first anniversary date of the granting of the Option. If the Committee provides, in its sole discretion, that any Stock Option is exercisable only in installments, the Committee may waive such installment exercise provisions at any time at or after grant in whole or in part, based on such factors as the Committee shall determine, in its sole discretion.

(d) Method of Exercise. Subject to whatever

installment exercise provisions apply under Section 5(c), Stock Options may be exercised in whole or in part at any time during the option period.

Payment of the exercise price may be made by check, note (if approved by the Board), or such other instrument or method as the Committee may accept. If so provided in the related Award Agreement, payment in full or in part may also be made by delivery of Stock owned by the optionee for at least six months prior to the exercise of the Option (based on the Fair Market Value of the Stock on the date the Option is exercised, as determined by the Committee). Payment of the exercise price may be made through exercise of either Tandem SARs or Freestanding SARs held by the optionee.

No shares of Stock shall be issued until full payment therefor has been made. An optionee shall generally have the rights to dividends or other rights of a shareholder with respect to shares subject to the Option after the optionee has given written notice of exercise, has paid in full for such Stock, and, if requested, has given the representation described in Section 11(a).

(e) Nontransferability of Options. Subject to Section 5(i) hereof, unless otherwise provided in the related Award Agreement, no Stock Option shall be transferable by the optionee otherwise than by will or by the laws of descent and distribution or pursuant to a qualified domestic relations order as defined by the Code or Title I of the Employee Retirement Income Security Act, or the rules and regulations thereunder, and all Stock Options shall be exercisable during the optionee's lifetime only by the optionee.

(f) Termination by Death. Subject to Section 5(i), if an optionee's employment by the Company or any Subsidiary, Parent, or Affiliate terminates by reason of death, any Stock Option held by such optionee may thereafter be exercised, to the extent such Option was exercisable at the time of death or on such accelerated basis as the Committee may determine at or after grant (or as may be determined in accordance with procedures established by the Committee), by the legal representative of the optionee's estate or by any person who acquired the Option by will or the laws of descent and distribution, for a period of one year (or such other period as the Committee may specify at grant) from the date of such death or until the expiration of the stated term of such Stock Option, whichever period is the shorter.

(g) Termination by Reason of Disability. Subject to Section 5(i), if an optionee's employment by the Company or any Subsidiary, Parent, or Affiliate terminates by reason of Disability, any Stock Option held by such optionee may thereafter be exercised by the optionee, to the extent it was exercisable at the time of termination or on such accelerated basis as the Committee may determine at or after grant (or as may be determined in accordance with procedures established by the Committee), until the expiration of the stated term of such Stock Option (unless otherwise specified by the Committee at the time of grant); provided, however, that, if the optionee dies prior to such expiration (or within such other period as the Committee shall specify at grant), any unexercised Stock Option held by such optionee shall thereafter be exercisable to the extent to which it was exercisable at the time of death for a period of one year from the date of such death or until the expiration of the stated term of such Stock Option, whichever period is the shorter.

(h) Other Termination. Subject to Section 5(i), unless otherwise determined by the Committee (or pursuant to procedures established by the Committee) at or after grant, if an optionee's employment by the Company or any Subsidiary, Parent, or Affiliate terminates for any reason other than death or Disability, the Stock Option shall be exercisable, to the extent otherwise then exercisable, for the lesser

of three months from the date of termination of employment or the balance of such Stock Option's term.

(i) Incentive Stock Options. Anything in the Plan to the contrary notwithstanding, no term of this Plan relating to Incentive Stock Options shall be interpreted, amended, or altered, nor shall any discretion or authority granted under the Plan be exercised, so as to disqualify the Plan under Section 422 of the Code or, without the consent of the optionee(s) affected, to disqualify any Incentive Stock Option under such Section 422.

To the extent required for "incentive stock option" status under Section 422 of the Code (taking into account applicable Internal Revenue Service regulations and pronouncements and court decisions), the Plan shall be deemed to provide:

(i) that Incentive Stock Options may be granted only to employees of the Company or any Parent or Subsidiary of the Company;

(ii) that the exercise price of any Incentive Stock Option shall not be less than 100% of the Fair Market Value of the Stock as of the date of grant (110% for an optionee who owns stock possessing more than 10% of the voting power of all classes of stock of the Company or of a Parent or Subsidiary);

(iii) that the maximum term of exercise for any Incentive Stock Option shall not exceed ten years (five years in the case of an optionee who owns stock possessing more than 10% of the voting power of all classes of stock of the Company or of a Parent or Subsidiary); and

(iv) that Incentive Stock Options shall not be transferable by the optionee otherwise than by will or the laws of descent and distribution and shall be exercisable, during the optionee's lifetime, only by the optionee.

To the extent permitted under Section 422 of the Code or applicable regulations thereunder or any applicable Internal Revenue Service pronouncements:

(i) if a Participant's employment is terminated by reason of death or Disability and the portion of any Incentive Stock Option that becomes exercisable during the post-termination period specified in Section 5(f) or (g) hereof exceeds the \$100,000 limitation contained in Section 422(d) of the Code, such excess shall be treated as a Nonqualified Stock Option; and

(ii) if the exercise of an Incentive Stock Option is accelerated by reason of a Change in Control, any portion of such Option that exceeds the \$100,000 limitation contained in Section 422(d) of the Code shall be treated as a Nonqualified Stock Option.

(j) No Tandem Options. Options consisting of both an Incentive Stock Option and a Nonqualified Stock Option shall not be granted under the Plan.

## 6. Stock Appreciation Rights.

(a) Grant and Exercise. Stock Appreciation Rights may be granted either alone ("Freestanding SAR") or in addition to other Awards granted under the Plan and may, but need not, relate to all or part of any Stock Option granted under the Plan ("Tandem SAR"). In the case of a Nonqualified Stock Option, a Tandem SAR may be granted either at or after the time of the grant of such Stock Option. In the case of an Incentive Stock Option, a Tandem SAR may be granted only at the time of the grant of such Stock Option.

A Tandem SAR shall terminate and no longer be exercisable upon the termination or exercise of the related Stock Option, subject to such provisions as the Committee may specify at grant where a Tandem SAR

is granted with respect to less than the full number of shares covered by a related Stock Option. Stock Options relating to exercised Tandem SARs shall no longer be exercisable to the extent that the related Tandem SARs have been exercised.

A Stock Appreciation Right may be exercised, subject to Section 6(b), in accordance with the procedures established by the Committee for such purpose and as set forth in the related Award Agreement. Upon such exercise, the optionee shall be entitled to receive an amount determined in the manner prescribed in Section 6(b).

(b) Terms and Conditions. Stock Appreciation Rights shall be subject to such terms and conditions, not inconsistent with the provisions of the Plan, as shall be determined from time to time by the Committee, including the following:

(i) The exercise price of a Tandem SAR shall be the exercise price of the related Option. The exercise price of a Freestanding SAR shall be not less than 100% of the Fair Market Value of the Stock on the date of grant of the Freestanding SAR. Notwithstanding the foregoing, the Committee may unilaterally limit the appreciation in value of Stock attributable to an SAR at any time prior to its exercise.

(ii) Stock Appreciation Rights shall be exercisable only at such time or times and to the extent provided in the related Award Agreement; provided, however, that the exercise provisions of an SAR granted in tandem with an Incentive Stock Option shall be the same as the related Option.

(iii) Upon the exercise of a Stock Appreciation Right, the holder shall be entitled to receive an amount in cash or shares of Stock equal in value to the excess of the Fair Market Value of one share of Stock on the date of exercise, or such other date as the Committee shall specify in the Award Agreement, over the exercise price per share specified in the related Award Agreement multiplied by the number of shares in respect of which the Stock Appreciation Right shall have been exercised, with the Committee having the right to determine the form of payment. When payment is to be made in Stock, the number of shares to be paid shall be calculated on the basis of the Fair Market Value of the Stock on the date of exercise.

(iv) Unless otherwise provided in the related Award Agreement, Stock Appreciation Rights shall not be transferable except under the laws of descent and distribution or pursuant to a qualified domestic relations order as defined by the Code or Title I of the Employee Retirement Income Security Act, or the rules thereunder, and shall be exercisable during the lifetime of the Participant only by the Participant.

(v) Upon the exercise of a Stock Appreciation Right, any related Stock Option or part thereof to which such Stock Appreciation Right is related shall be deemed to have been exercised for the purpose of the limitation set forth in Section 3 of the Plan on the number of shares of Stock to be issued under the Plan.

## 7. Other Stock-Based Awards.

(a) Administration. Other Awards of Stock or that are valued in whole or in part by reference to, or are otherwise based on, Stock ("Other Stock-Based Awards"), including, without limitation, performance shares, convertible preferred stock, convertible debentures, or exchangeable securities, may be granted either alone or in addition to or in tandem with Stock Options or Stock Appreciation Rights granted under the Plan.



Subject to the provisions of the Plan, the Committee shall have authority to determine the persons to whom and the time or times at which such Awards shall be made, the number of shares of Stock to be awarded pursuant to such Awards, and all other conditions of the Awards. The Committee may also provide for the grant of Stock upon the completion of a specified performance period.

The provisions of Other Stock-Based Awards need not be the same with respect to each recipient.

(b) Terms and Conditions. Unless otherwise provided in the related Award Agreement, Stock subject to Awards made under this Section 7 may not be sold, assigned, transferred, pledged, or otherwise encumbered prior to the date on which the Stock is issued or, if later, the date on which any applicable restriction, performance, or deferral period lapses.

The Participant shall be entitled to receive, currently or on a deferred basis, interest or dividends or interest or dividend equivalents with respect to the Stock covered by the Award, as determined at the time of the Award by the Committee, in its sole discretion, and the Committee may provide that such amounts (if any) shall be deemed to have been reinvested in additional Stock or otherwise reinvested.

Any Award under Section 7 and any Stock covered by any such Award shall vest or be forfeited to the extent so provided in the Award Agreement, as determined by the Committee, in its sole discretion.

In the event of the Participant's retirement, Disability, or death, or in cases of special circumstances, the Committee may, in its sole discretion, waive in whole or in part any or all of the remaining limitations imposed with respect to any or all of an Award under this Section 7.

Each Award under this Section 7 shall be confirmed by, and subject to the terms of, an Award Agreement or other instrument entered into by the Company and the Participant.

Stock (including securities convertible into Stock) issued on a bonus basis under this Section 7 may be issued for no cash consideration. The purchase price of any Stock (including securities convertible into Stock) subject to a purchase right awarded under this Section 7 shall be at least 85% of the Fair Market Value of the Stock on the date of grant.

8. Change in Control Provisions.

(a) Impact of Event. In the event of a "Change in Control" as defined in Section 8(b), any Award granted under this Plan shall become fully exercisable and vested.

(b) Definition of "Change in Control." For purposes of Section 8(a), a "Change in Control" means the happening of any of the following:

(i) A majority of the directors of the Company shall be persons other than persons

(A) For whose election proxies shall have been solicited by the Board, or

(B) Who are then serving as directors appointed by the Board to fill vacancies on the Board caused by death or resignation (but not by removal) or to fill newly-created directorships,

(ii) 30% or more of the outstanding voting stock of the Company is acquired or beneficially owned (as defined in Rule 13d-3 under the Exchange Act or any successor rule thereto) by any person (other than the Company or a subsidiary of the Company) or

group of persons acting in concert (other than the acquisition and beneficial ownership by a parent corporation or its wholly-owned subsidiaries, as long as they remain wholly-owned subsidiaries, of 100% of the outstanding voting stock of the Company as a result of a merger which complies with paragraph (iii)(A)(2) hereof in all respects), or

(iii) The shareholders of the Company approve a definitive agreement or plan to

(A) Merge or consolidate the Company with or into another corporation other than

(1) a merger or consolidation with a subsidiary of the Company or

(2) a merger in which

(a) the Company is the surviving corporation,

(b) no outstanding voting stock of the Company (other than fractional shares) held by shareholders immediately prior to the merger is converted into cash, securities, or other property (except (i) voting stock of a parent corporation owning directly, or indirectly through wholly owned subsidiaries, both beneficially and of record 100% of the voting stock of the Company immediately after the merger and (ii) cash upon the exercise by holders of voting stock of the Company of statutory dissenters' rights),

(c) the persons who were the beneficial owners, respectively, of the outstanding common stock and outstanding voting stock of the Company immediately prior to such merger beneficially own, directly or indirectly, immediately after the merger, more than 70% of, respectively, the then outstanding common stock and the then outstanding voting stock of the surviving corporation or its parent corporation, and

(d) if voting stock of the parent corporation is exchanged for voting stock of the Company in the merger, all holders of any class or series of voting stock of the Company immediately prior to the merger have the right to receive substantially the same per share consideration in exchange for their voting stock of the Company as all other holders of such class or series,

(B) exchange, pursuant to a statutory exchange of shares of voting stock of the Company held by shareholders of the Company immediately prior to the exchange, shares of one or more classes or series of voting stock of the Company for cash, securities, or other property,

(C) sell or otherwise dispose of all or substantially all of the assets of the Company (in one transaction or a series of transactions), or

(D) liquidate or dissolve the Company.

9. Amendments and Termination.

The Board may amend, alter, discontinue, or terminate the Plan, or any portion thereof, but no amendment, alteration, or discontinuation shall be made which would impair the vested rights of a Participant under any Award theretofore granted without the Participant's consent or which, without the approval of the Company's shareholders, would:

(a) except as expressly provided in this Plan, increase the total number of shares reserved for the purpose of the Plan;

(b) authorize an increase in the total number of shares reserved for issuance upon exercise of Incentive Stock Options;

(c) decrease the option price of any Incentive Stock Option to less than 100% of the Fair Market Value on the date of grant;

(d) permit the issuance of Stock prior to payment in full therefor;

(e) change the employees or class of employees eligible to participate in the Plan; or

(f) extend the maximum option period under Section 5(i) of the Plan.

The Committee may amend the terms of any Award theretofore granted, prospectively or retroactively, but, subject to Section 3 above, no such amendment shall impair the vested rights of any holder without the holder's consent. The Committee may also substitute new Stock Options for previously granted Stock Options (on a one-for-one or other basis), including previously granted Stock Options having higher option exercise prices.

Subject to the above provisions, the Board shall have broad authority to amend the Plan to take into account changes in applicable securities and tax laws and accounting rules, as well as other developments.

10. Unfunded Status of Plan.

The Plan is intended to constitute an "unfunded" plan for incentive and deferred compensation. With respect to any payments not yet made to a Participant by the Company, nothing contained herein shall give any such Participant any rights that are greater than those of a general creditor of the Company. In its sole discretion, the Committee may authorize the creation of trusts or other arrangements to meet the obligations created under the Plan to deliver Stock or payments in lieu of or with respect to Awards hereunder; provided, however, that, unless the Committee otherwise determines with the consent of the affected Participant, the existence of such trusts or other arrangements is consistent with the "unfunded" status of the Plan.

11. General Provisions.

(a) The Committee may require each person purchasing shares pursuant to a Stock Option or receiving shares pursuant to any other Award under the Plan to represent to and agree with the Company in writing that the Participant is acquiring the shares without a view to distribution thereof. The certificates for such shares may include any legend which the Committee deems appropriate to reflect any restrictions on transfer.

All certificates for shares of Stock or other securities delivered under the Plan shall be subject to such stop transfer orders and other restrictions as the Committee may deem advisable under the rules, regulations, and other requirements of the Securities and Exchange Commission, any over-the-counter market on which the Stock is quoted, any stock exchange upon which the Stock is then listed, and any applicable

federal or state securities law, and the Committee may cause a legend or legends to be put on any such certificates to make appropriate reference to such restrictions.

(b) The Committee may at any time offer to buy out for a payment in cash or Stock an Award previously granted, based on such terms and conditions as the Committee shall establish and communicate to the Participant at the time that such offer is made.

(c) Nothing contained in this Plan shall prevent the Board from adopting other or additional compensation arrangements, subject to shareholder approval if such approval is required; and such arrangements may be either generally applicable or applicable only in specific cases.

(d) Neither the adoption of this Plan nor the grant of any Award hereunder shall confer upon any employee of the Company or any Subsidiary, Parent, or Affiliate any right to continued employment with the Company or a Subsidiary, Parent, or Affiliate, as the case may be, or interfere in any way with the right of the Company or a Subsidiary, Parent, or Affiliate to terminate the employment of any of its employees at any time.

(e) No later than the date as of which an amount first becomes includable in the gross income of the Participant for federal income tax purposes with respect to any Award under the Plan, the Participant shall pay to the Company, or make arrangements satisfactory to the Committee regarding the payment of, any federal, state, or local taxes of any kind required by law to be withheld with respect to such amount. The obligations of the Company under the Plan shall be conditional on such payment or arrangements, and the Company and any Subsidiary, Parent, or Affiliate shall, to the extent permitted by law, have the right to deduct any such taxes from any payment of any kind otherwise due to the Participant. If so provided in the related Award Agreement, a Participant may authorize the withholding of shares of Stock otherwise deliverable upon exercise of an Option or the grant or vesting of an Award to satisfy any tax obligations arising from such exercise, grant, or vesting.

(f) The actual or deemed reinvestment of dividends or dividend equivalents in additional Stock at the time of any dividend payment shall only be permissible if sufficient shares of Stock are available under Section 3 for such reinvestment (taking into account then outstanding Stock Options and other Plan Awards).

(g) To the extent that federal laws (such as the Code, the Exchange Act, or the Employee Retirement Income Security Act of 1974) do not otherwise control, this Plan and all Awards made and actions taken hereunder shall be governed by and construed in accordance with the laws of the State of Minnesota.

(h) Unless otherwise provided in the related Award Agreement, no rights granted hereunder may be assigned, transferred, pledged, or hypothecated (whether by operation of law or otherwise) or be subject to execution, attachment, or similar process, and any attempted assignment, transfer, pledge, hypothecation, or other disposition or levy of attachment or similar process upon any such right will be null and void and without effect.

(i) If any term, provision, or portion of this Plan or any Award granted hereunder shall be deemed unenforceable or in violation of applicable law, such term, provision, or portion of the Plan or the Award shall be deemed severable from all other terms, provisions, or portions of this Plan or the Award or any other Awards granted hereunder, which shall otherwise continue in full force and effect.

The Plan shall be effective as of March 4, 1997, subject to the approval of the Plan by a majority of the votes cast by the holders of the Company's Common Stock at the annual shareholders' meeting next following adoption of the Plan. Any grants made under the Plan prior to such approval shall be effective when made (unless otherwise specified by the Committee at the time of grant), but shall be conditioned on, and subject to, such approval of the Plan by such shareholders.

13. Term of Plan.

No Incentive Stock Option shall be granted pursuant to the Plan on or after the tenth anniversary of the date of adoption of the Plan, but Incentive Stock Options granted prior to such tenth anniversary may extend beyond that date. All other Awards may be granted at any time and for any period unless otherwise provided by the Plan.

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Approved and adopted by the Board of Directors of APA Optics, Inc. as of March 4, 1997, and approved by the shareholders on \_\_\_\_\_.



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<ARTICLE> 5

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<LOSS-PROVISION>	0
<INTEREST-EXPENSE>	156,231
<INCOME-PRETAX>	(10,023)
<INCOME-TAX>	1,000
<INCOME-CONTINUING>	(11,023)
<DISCONTINUED>	0
<EXTRAORDINARY>	0
<CHANGES>	0
<NET-INCOME>	(11,023)
<EPS-PRIMARY>	(.00)
<EPS-DILUTED>	(.00)

</TABLE>