

SCHEDULE 14A  
(RULE 14A-101)  
INFORMATION REQUIRED IN PROXY STATEMENT  
SCHEDULE 14A INFORMATION  
PROXY STATEMENT PURSUANT TO SECTION 14(A) OF THE SECURITIES  
EXCHANGE ACT OF 1934 (AMENDMENT NO. \_\_\_\_\_ )

FILED BY THE REGISTRANT [X]

FILED BY A PARTY OTHER THAN THE REGISTRANT [ ]

CHECK THE APPROPRIATE BOX:

[ ] PRELIMINARY PROXY STATEMENT

[X] DEFINITIVE PROXY STATEMENT

[ ] DEFINITIVE ADDITIONAL MATERIALS

[ ] SOLICITING MATERIAL PURSUANT TO RULE 14A-11(C) OR RULE 14A-12

APA OPTICS, INC.

-----  
(NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

-----  
(NAME OF PERSON(S) FILING PROXY STATEMENT, IF OTHER THAN THE REGISTRANT)

PAYMENT OF FILING FEE (CHECK THE APPROPRIATE BOX):

[X] NO FEE REQUIRED

[ ] FEE COMPUTED ON TABLE BELOW PER EXCHANGE ACT RULES 14A-6(I) (1)  
AND 0-11.

(1) TITLE OF EACH CLASS OF SECURITIES TO WHICH TRANSACTION APPLIES:

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(2) AGGREGATE NUMBER OF SECURITIES TO WHICH TRANSACTION APPLIES:

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(3) PER UNIT PRICE OR OTHER UNDERLYING VALUE OF TRANSACTION COMPUTED  
PURSUANT TO EXCHANGE ACT RULE 0-11 (SET FORTH THE AMOUNT ON WHICH THE FILING FEE  
IS CALCULATED AND STATE HOW IT WAS DETERMINED):

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(4) PROPOSED MAXIMUM AGGREGATE VALUE OF TRANSACTION:

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(5) TOTAL FEE PAID:

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[ ] CHECK BOX IF ANY PART OF THE FEE IS OFFSET AS PROVIDED BY EXCHANGE  
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OR THE FORM OR SCHEDULE AND THE DATE OF FILING.

(1) AMOUNT PREVIOUSLY PAID:

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(2) FORM, SCHEDULE OR REGISTRATION STATEMENT NO.:

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(3) FILING PARTY:

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(4) DATE FILED:  
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APA OPTICS, INC.  
2950 N.E. 84TH LANE  
BLAINE, MINNESOTA 55449

NOTICE OF ANNUAL MEETING OF SHAREHOLDERS

TO OUR SHAREHOLDERS:

The 2001 Annual Meeting of the shareholders of APA Optics, Inc., a Minnesota corporation (the "Company"), will be held at the Four Points Sheraton, 1330 Industrial Boulevard, Minneapolis, Minnesota 55431, on August 15, 2001, at 3:30 p.m., Central Daylight Time, to consider and vote upon the following matters:

1. Election of five directors.
2. Amendment of the 1997 Stock Compensation Plan.
3. Such other business as may properly come before the meeting or any adjournment or adjournments thereof.

We have fixed the close of business on July 2, 2001, as the record date for the determination of shareholders entitled to notice of and to vote at the Annual Meeting. Our transfer books will not be closed.

Whether or not you expect to be present personally at the Annual Meeting, please complete, date, sign, and return the accompanying Proxy in the enclosed, self-addressed envelope at your earliest convenience. This will insure your participation in the decisions to be made by the shareholders. We sincerely hope that all shareholders who can attend the Annual Meeting will do so.

BY ORDER OF THE BOARD OF DIRECTORS

Kenneth A. Olsen  
Secretary

July 20, 2001

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APA OPTICS, INC.  
2950 N.E. 84TH LANE  
BLAINE, MINNESOTA 55449

PROXY STATEMENT  
FOR ANNUAL MEETING OF SHAREHOLDERS  
AUGUST 15, 2001

The accompanying Proxy is solicited by the Board of Directors of APA Optics, Inc. (the "Company") in connection with the 2001 Annual Meeting of the Shareholders of the Company, to be held on August 15, 2001, at 3:30 p.m. Minneapolis time, at the Four Points Sheraton, 1330 Industrial Boulevard, Minneapolis, Minnesota 55431 and any adjournments thereof. This Proxy Statement is first being mailed to shareholders on or about July 20, 2001.

#### HOW TO VOTE

- By signing and returning the enclosed proxy card, you will be giving your proxy to our board of directors and authorizing them to vote your shares.

#### HOW YOUR PROXY WILL BE VOTED

- Unless revoked, all properly executed Proxies will be voted as specified. Proxies that are signed but that lack any specification will, subject to the following, be voted FOR all nominees for director as listed herein and FOR each other proposal described in this Proxy Statement. If any other matters properly come before the Annual Meeting, or if any of the persons named to serve as directors should decline or be unable to serve, the persons named in the Proxy will vote in accordance with their discretion.

#### HOW TO REVOKE YOUR PROXY

- You have the power to revoke your proxy at any time before the convening of the Annual Meeting. Revocations of proxy will be honored if received by us, at the Company, addressed to the attention of Anil K. Jain, on or before August 14, 2001. In addition, on the day of the meeting, prior to the convening thereof, revocations may be delivered to the tellers who will be seated at the door of the meeting room.

#### ABSTENTIONS

- If you abstain from voting as to any matter, your shares shall be deemed present at the meeting for purposes of determining a quorum and for purposes of calculating the vote with respect to such matter, but shall not be deemed to have been voted in favor of such matter. Abstentions, therefore, as to any proposal will have the same effect as votes against such proposal.

#### BROKER NON-VOTES

- If a broker turns in a "non-vote" Proxy, indicating a lack of voting instruction by the beneficial holder of the shares and a lack of discretionary authority on the part of the broker to vote on a particular matter, then the shares covered by such non-vote Proxy will be considered present at the meeting for purposes of determining a quorum but will not be considered to be represented at the meeting for purposes of calculating the vote required for approval of such matter.

#### COST OF SOLICITATION

- We will pay all expenses in connection with the solicitation of proxies. Proxies are being solicited primarily by mail, but officers, directors, and other employees of the Company may also solicit proxies by telephone, telegraph, or personal calls. No extra compensation will be paid by us for such solicitation. We may reimburse brokers, banks, and other nominees holding shares for others for the cost of forwarding proxy materials to, and obtaining proxies from, their principals.

#### VOTING RIGHTS

Only shareholders of record at the close of business on July 2, 2001, are entitled to notice of and to vote at the meeting or any adjournment thereof. As of that date, we had issued and outstanding 11,919,081 shares of common stock. Each holder of record of our common stock is entitled to one vote for each share registered in the shareholder's name as of the record date. The Articles of Incorporation of the Company do not grant the shareholders the right to vote cumulatively for the election of directors. No shareholder will have appraisal rights or similar dissenter's rights as a result of any matters expected to be voted on at the meeting.

The presence in person or by proxy of holders of a majority of the shares of common stock entitled to vote at the Annual Meeting will constitute a quorum for the transaction of business.

The following table shows as of July 2, 2001, the stock ownership of (i) all persons known by us to be beneficial owners of more than five percent of our outstanding shares of common stock, (ii) each director and each nominee for election as a director, (iii) the Named Executive Officer (as defined below under the caption "Executive Compensation"), and (iv) all current directors and executive officers as a group:

NAME AND ADDRESS OF BENEFICIAL OWNER	NUMBER OF SHARES BENEFICIALLY OWNED	PERCENTAGE OF OUTSTANDING SHARES
Anil K. Jain 2950 N.E. 84th Lane Blaine, Minnesota 55449	1,670,502 (1)	14.0%
Kenneth A. Olsen 2950 N.E. 84th Lane Blaine, Minnesota 55449	742,832 (2)	6.2
Herman Lee 20152 Highway 9N Borup, Minnesota 56519	801,000	6.7
Gregory J. Von Wald	25,000 (3)	*
William R. Franta	15,000 (4)	*
Michael A. Gort	10,000 (5)	*
All current directors and executive officers as a group (6 persons)	2,463,334 (3) (4) (5)	20.6

\* Less than 1%.

- (1) Includes 5,250 shares held by Dr. Jain as custodian for minor relatives. Dr. Jain disclaims beneficial ownership of such shares.
- (2) Includes 19,332 shares held in trusts for Anil K. Jain's children, of which Mr. Olsen serves as trustee. Mr. Olsen disclaims beneficial ownership of such shares.
- (3) Includes 25,000 shares that may be acquired upon exercise of options that are or will become exercisable within sixty days of the record date.
- (4) Includes 15,000 shares that may be acquired upon exercise of options that are or will become exercisable within sixty days of the record date.
- (5) Includes 10,000 shares that may be acquired upon the exercise of options that are or will become exercisable within sixty days of the record date.

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PROPOSAL NO. 1

ELECTION OF DIRECTORS

Our Board of Directors has nominated the individuals listed below for election as directors, each to serve until the next annual meeting of the shareholders and until his successor is elected and qualified or until his earlier resignation or removal. All of the nominees are currently directors.

Unless instructed not to vote for the election of directors or not to vote for any specific nominee, your proxy will be voted to elect the listed nominees. If any nominee withdraws as a candidate or is otherwise unavailable to stand for election at the meeting, the named proxies will vote for such other persons as they may determine, in their discretion. We do not anticipate that any candidate will withdraw.

The following information is provided with respect to the nominees for directors:

NAME	AGE	DIRECTOR SINCE
Anil K. Jain	55	1979
Kenneth A. Olsen	57	1980
Gregory J. Von Wald	51	1997
William R. Franta	59	1998
Michael A. Gort	52	2000

Anil K. Jain has been president of the Company since 1979, Chairman of the Board since 1987, and chief executive officer since 1988. He also served as chief financial officer and treasurer until August 2000. Dr. Jain is a past director and former chairman of Minnesota Project Innovation, Inc., a nonprofit corporation.

Kenneth A. Olsen has been secretary of the Company since 1983 and vice president since 1992. Mr. Olsen manages the Company's optics fabrication operations. Prior to joining the Company in 1979, Mr. Olsen had been employed at 3M since 1966.

Gregory J. Von Wald joined Golden West Technologies, Inc. as the General Manager in December 1999. Prior thereto he had served as Vice President for Technical Services for NorCom Advanced Technologies, Inc., a firm providing telecommunications equipment and related services. He had been with NorCom, or its predecessor, Tel Serv Telecommunications, Inc., as an owner or officer, since 1992. Mr. Von Wald is serving on the Board as a representative of the Aberdeen Development Council, one of the funding sources for the Company's Aberdeen, South Dakota, manufacturing facility.

Dr. William R. Franta has been a venture investment consultant since October 2000. Prior thereto he had served as Vice President of Product Strategy and Development for REAL Solutions, a systems integrator in the data communications, storage systems, and server platform markets, since July 1999 and as Vice President of Marketing for Centron-DPL, a VAR/Integrator for

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networking infrastructure, from 1996 to 1999. From 1987 through 1996, he served as a senior vice president and in other positions with Network Systems Corporation (which was acquired by Storage Technology Corporation in 1995), primarily in charge of advanced development, product development, and product marketing. He currently serves as a director of Waters Instruments, Inc.

Michael A. Gort has been Chairman and Chief Executive Officer of Bravo Zulu! Interactive, an interactive multimedia development company, since May 2000. Prior thereto, he was a consultant to high tech companies. From March 1990 through June 1997, he was employed by Morgan Stanley Dean Witter, most recently (March 1995 - June 1997) as a Managing Director in the Information Technology Division.

Board Meetings. The Board of Directors held seven meetings during fiscal 2001. All directors attended at least 85% of the meetings of the Board of Directors and of each committee on which they served.

Audit Committee. The members of the audit committee in fiscal 2001 were Messrs. Gort (chair), Franta, and Von Wald. The audit committee is responsible for meeting with the Company's independent public accountants to discuss the annual audit and related accounting and financial matters. The audit committee held three meetings in fiscal 2001. The audit committee operates under a written charter adopted by the Board of Directors, a copy of which is attached to this proxy statement as Annex 1.

Compensation Committee. The members of the compensation committee in fiscal 2001 were Messrs. Franta (chairman), Gort and Von Wald. The compensation committee met once during fiscal 2001 to consider the compensation of the executive officers.

Compensation of Directors. Each director who is not also an employee of the Company receives an annual director's fee of \$5,000 and \$500 for each Board or committee meeting attended (subject to a maximum of \$500 per day). We paid a total of \$25,500 in directors' fees for services rendered during fiscal 2001.

Under the terms of our Stock Option Plan for Nonemployee Directors, each director who is not otherwise an employee of the Company receives annually, on the first business day following the annual shareholders' meeting or, if earlier, on September 1, an option to purchase 5,000 shares of common stock. The exercise price for the option equals the fair market value of the stock on the date of grant. Each option becomes exercisable on the earlier of the date of the next annual shareholders' meeting or one year from the date of grant and is exercisable for a period of four years thereafter. During fiscal 2001, options to purchase 15,000 shares at \$17.15 per share were awarded to nonemployee directors pursuant to this Plan.

In addition, during fiscal 2001, each director was granted an option to purchase 5,000 shares at \$14.00 per share in recognition of the extra demands made on the directors' time and attention during the first half of 2000. These options were immediately exercisable and expire June 28, 2005.

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PROPOSAL NO. 2

#### AMENDMENT OF 1997 STOCK COMPENSATION PLAN

In 1997, the Board of Directors adopted and the shareholders approved the 1997 Stock Compensation Plan (the "Plan"). The original purpose of the Plan was to assist in attracting, retaining and rewarding key employees at the Company's facility in Aberdeen, South Dakota. Accordingly, only employees at the Aberdeen facility are eligible participants. A total of 500,000 shares of common stock were originally reserved for issuance under the Plan, and as of July 2, 2001, 375,000 shares of common stock remain available for grants under the Plan.

On May 15, 2001, the Board of Directors approved amendments to the Plan, subject to shareholder approval, to increase the number of shares of common

stock authorized for issuance thereunder from 500,000 shares to 750,000 shares, to increase the number of shares available for incentive stock options from 500,000 shares to 750,000 shares, to limit the number of shares that may be included in awards to any individual participant to 200,000, and to revise the definition of eligible participants in the Plan to include all employees of, and consultants and advisers to, the Company and any Subsidiary, Parent, or Affiliate (as those terms are defined in the Plan). A copy of the amended Plan is available upon request from the Company.

The Company has reserved 500,000 shares of common stock for options to be granted to employees at the Blaine facility. As of July 2, 2001, options to purchase 269,125 shares had been granted from that reserve. It is intended that this reserve be reduced by 200,000 shares and the remaining shares used for the grant of nonqualified options as appropriate. Accordingly, the increase in the number of shares available under the Plan results in only a slight increase in the total number of shares authorized for the grant of options.

The Board of Directors believes that compensation based on the value of the Company's stock is an important element in attracting and retaining highly skilled and qualified employees and other persons and, further, that stock-based awards are highly effective in aligning the interests of these individuals with those of the shareholders. Therefore, the Board of Directors believes that it is desirable to amend the Plan to authorize additional shares of common stock and to expand the class of eligible participants.

The Board of Directors has amended the Plan to expand its usefulness to the Company in attracting and retaining employees at both its Aberdeen and Blaine facilities and to allow for the grant of options to certain consultants and advisers. The Board believes that offering persons capable of contributing to the growth and success of the Company an opportunity to acquire a proprietary interest in the Company will provide these individuals with incentives to put forth maximum efforts for the success of the Company's business.

Description of Plan. The Plan provides for grants of both incentive stock options, intended to qualify as such under Section 422 of the Internal Revenue Code of 1986 (the "Code"), and nonstatutory stock options, stock appreciation rights, and other stock-based awards. Except for the authority to grant incentive stock options, which expires in 2007, the Plan has no expiration date

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but may be terminated by the Board of Directors at any time, subject to the rights of the holders of options or other awards previously granted under the Plan.

Shares Subject to the Plan. A total of 500,000 shares of Common Stock were originally reserved for issuance under the Plan. The proposed amendment will increase that number to 750,000 shares. No individual participant may receive awards for more than 200,000 shares. The shares of Common Stock that may be issued or transferred to grantees under the Plan may be authorized but unissued shares or outstanding shares acquired by the Company. The Plan provides for appropriate adjustment in the number of shares subject to the Plan and to the grants previously made if there is a stock split, stock dividend, reorganization or other relevant change affecting the Company's corporate structure or its equity securities. If shares subject to an award are not issued to the extent permitted prior to expiration of the award or an award is otherwise forfeited, such shares will become available for inclusion in future grants. On July 2, 2001, the closing price for the Common Stock on The Nasdaq National Market was \$8.79 per share.

Administration. The Plan will be administered by the Board or a committee composed of "non-employee" directors (as defined in Rule 16b-3 promulgated under Section 16 of the Securities Exchange Act of 1934 (the "Exchange Act")). The Board or committee will determine the participants, grant stock options, with or without stock appreciation rights, and other awards, establish rules and regulations for the operation of the Plan, and determine the price, term, vesting schedule, number of shares and other terms of options and other awards. The Board or committee may delegate its powers and duties to members of the Company's administration with respect to participants who are not subject to Section 16.

Eligible Participants. As originally adopted, only employees employed at the Company's Aberdeen facility were eligible to receive grants under the Plan. As amended, the Plan will allow grants of awards to any employee of the Company or any Affiliate or Subsidiary, no matter where located, and to certain consultants and advisers.

As of July 2, 2001, there were approximately 60 employees eligible to participate in the Plan. The number of grantees may vary from year to year.

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The following table sets forth, as of July 2, 2001, the number of stock options granted under the Plan to the Named Executive Officer (see "Summary Compensation Table"), all current executive officers as a group, and all

employees, including officers who are not executive officers, as a group. No director or director nominee or nonemployee has received any grant under the Plan, nor has any person been granted options to purchase 5% or more of the shares available under the Plan.

	Number of Shares -----
Anil K. Jain, Named Executive Officer	0
All current executive officers, as a group (3 persons)	0
All employees (excluding executive officers) as a group (57 persons)	125,000

Stock Options. Options granted under the Plan may be in the form of either options that qualify as "incentive stock options" under Section 422 of the Code ("ISOs") or those that do not qualify as such ("NQSOs"). The term of an option will be fixed by the Board or committee, but no option may have a term of more than ten years from the date of grant. Options will be exercisable at such times as determined by the Board or committee. The option exercise price will be determined by the Board or committee at the time of grant but will not be less than 85% of the fair market value of the Common Stock on the date of grant (100% of the fair market value for ISOs). The grantee may pay the option price in cash or, if permitted by the Board, by note or by delivering to the Company shares of Common Stock already owned by the grantee that have a fair market value equal to the option exercise price. The Code also places the following additional restrictions on the award of ISOs. If an ISO is granted to a participant who owns, at the date of grant, in excess of 10% of the Company's outstanding Common Stock, the exercise price must be at least 110% of the fair market value on the date of grant and the term of the ISO may be no more than five years from the date of grant. The total fair market value of shares subject to ISOs which are exercisable for the first time by any participant in any given calendar year cannot exceed \$100,000 (valued as of the date of grant).

Stock Appreciation Rights. The Board or committee may grant stock appreciation rights ("SARs") in connection with a stock option granted under the Plan. If a grantee exercises a SAR, the grantee will receive an amount equal to the excess of the fair market value of the shares with respect to which the SAR is being exercised over the option exercise price of the shares. If a SAR is exercised in whole or in part, the right under the related option to purchase shares with respect to which the SAR has been exercised will terminate to the same extent. If a stock option is exercised, any SAR related to the shares purchased will terminate.

Other Stock-Based Awards. The Board or committee, in its discretion, may grant other awards that are valued in whole or in part by reference to, or otherwise based on, the Common Stock, including, without limitation, performance shares, convertible preferred stock, convertible debentures, or exchangeable securities. Such awards may be granted in addition to or in tandem with stock

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options or stock appreciation rights granted under the Plan. The Board or committee may set such terms with regard to the vesting of such awards as it deems reasonable.

Termination of Employment. Unless otherwise provided in the related award agreement, awards granted under the Plan are generally not transferable other than 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. Following the death of an optionee, any option held may be exercised, to the extent such option was exercisable at the time of death or on such accelerated basis as the Board or committee may determine at or after grant, 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 Board or committee may specify at grant) from the date of such death or until the expiration of the stated term of the option, whichever period is shorter. If a participant's employment by the Company is terminated by reason of disability, any option held by such participant may thereafter be exercised, to the extent it was exercisable at the time of termination or on such accelerated basis as the Board or committee may determine at or after grant until the expiration of the stated term of such option (unless otherwise specified by the Board or committee at the time of grant). If the optionee dies prior to the expiration of any unexercised option, the option may thereafter be exercised to the extent it was exercisable at the time of death for a period of one year from the date of death or until the expiration of the stated term of the option, whichever period is shorter. If any optionee's employment by the Company is terminated for any other reason, the option may be exercised, to the extent otherwise then exercisable, for the lesser of three months from the date of termination of employment or the balance of the term of the option. Terms for awards other than stock options and stock appreciation rights may be set by the Board or committee at the time of the granting of the award.

Change of Control. In the event of a "Change in Control" (as defined in the Plan) any award granted under the Plan will become fully exercisable and vested. For purposes of the Plan, a "Change in Control" occurs when (i) the majority of the directors of the Company are persons other than persons whose election has been solicited by the Board of Directors or have been appointed by the Board to fill vacancies created by death, resignation, or a new position, (ii) any person or group of persons (as defined in Section 13(d) of the Exchange Act and the rules thereunder) acquires 30% or more of the outstanding voting stock of the Company, or (iii) the shareholders of the Company approve a merger or consolidation (other than a merger or consolidation with a subsidiary of the Company or in which the Company is the surviving corporation and the shareholders of the Company immediately prior to the merger own more than 70% of the outstanding voting stock of the surviving corporation or its parent corporation), exchange of shares, sale or other disposition of all or substantially all of the Company's assets, or liquidation or dissolution of the Company.

Tax Rules. The following is a brief summary of the federal income tax rules currently applicable to stock options that may be granted under the Plan.

The grant of a NQSO will have no immediate tax consequences to the grantee or to the Company. Upon the exercise of a NQSO, the grantee will recognize ordinary income (and the Company will generally be entitled to a compensation

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deduction) in an amount equal to the excess of the fair market value of the shares of Common Stock on the date of the exercise of the option over the option exercise price. The grantee's tax basis in the shares will be the exercise price plus the amount of ordinary income recognized by the grantee, and the grantee's holding period will commence on the date the shares are transferred. Special rules apply in the event all or a portion of the exercise price is paid in the form of stock. Other special rules may also apply to a grantee who is subject to Section 16 of the Exchange Act.

Upon a subsequent sale of shares of Common Stock acquired pursuant to the exercise of an NQSO, any difference between the grantee's tax basis in the shares and the amount realized on the sale is treated as long-term or short-term capital gain or loss, depending on the holding period of the shares.

The grant of an ISO will have no immediate tax consequences to the grantee or to the Company. The exercise of an ISO by the payment of cash to the Company will generally have no immediate tax consequences to the grantee (except to the extent it is an adjustment in computing alternative minimum taxable income) or to the Company. If a grantee holds the shares acquired pursuant to the exercise of an ISO for the required holding period, the grantee generally will realize long-term capital gain or long-term capital loss upon a subsequent sale of the shares in the amount of the difference between the amount realized upon the sale and the purchase price of the shares (i.e., the exercise price). In such a case, no compensation deduction will be allowable to the Company in connection with the grant or exercise of the ISO or the sale of shares of Common Stock acquired pursuant to such exercise.

If, however, a grantee disposes of the shares prior to the expiration of the required holding period (a "disqualifying disposition"), the grantee will recognize ordinary income (and the Company will generally be entitled to a compensation deduction) equal to the excess of the fair market value of the shares of Common Stock on the date of exercise (or the proceeds of the disposition, if less) over the exercise price. Special rules apply in the event all or a portion of the exercise price is paid in the form of stock.

Certain limitations apply to the Company's deduction of compensation payable to the person serving as its chief executive officer or to any of its four other most highly compensated executives in office as of the end of the year in which such compensation would otherwise be deductible. In general, the Company may not deduct compensation, other than "performance-based" compensation, payable to such an executive in excess of \$1 million for any year. The Plan's limitation on the total number of shares that may be included in awards to any individual participant is intended to qualify options under the Plan as "performance-based" compensation eligible to be excluded from the \$1 million limitation.

The affirmative vote of a majority of the shares of Common Stock present and voting on such matter is necessary for the proposed amendment of the 1997 Stock Compensation Plan.

THE BOARD OF DIRECTORS RECOMMENDS THAT YOU VOTE FOR THE APPROVAL OF THE AMENDMENTS TO THE 1997 STOCK COMPENSATION PLAN. YOUR PROXY WILL BE SO VOTED UNLESS YOU SPECIFY OTHERWISE.



Summary Compensation Table. The following table sets forth certain information regarding compensation paid during each of our last three fiscal years to our chief executive officer, who is the only executive officer whose total annual compensation in fiscal 2001 (based on salary and bonus) exceeded \$100,000 (the "Named Executive Officer").

NAME PRINCIPAL POSITIONS	FISCAL YEAR	ANNUAL COMPENSATION		ALL OTHER COMPENSATION
		SALARY	BONUS	
Anil K. Jain	2001	\$147,015	\$83,025(1)	\$ 8,260(2)
President and Chief Executive Officer	2000	136,463	-	
	1999	135,000	-	

(1) Includes payment of special bonus of \$68,850 for services in fiscal 2001 and bonus of \$14,175 for fiscal 1999.

(2) Consists of Company contribution on Dr. Jain's behalf to 401(k) plan.

Change of Control Arrangement. We have an agreement with Anil K. Jain providing for certain benefits in the event of a change in control of the Company. If, following a change in control (as defined in the agreement), Dr. Jain's employment is terminated within 36 months other than for "cause" (as defined) or as a result of his retirement, disability, or death, or if Dr. Jain terminates his employment for "good reason" (as defined), he is to receive a lump sum payment equal to two and one-half times his annualized includable compensation for the base period (as defined in Section 280G(d) of the Internal Revenue Code of 1986, as amended). "Good reason" includes certain changes in Dr. Jain's duties, responsibilities, status, salary, benefits, and other similar terms of his employment made without his consent. A "change in control" for purposes of the agreement includes a consolidation or merger of the Company in which the Company is not the continuing or surviving corporation, any sale, lease, exchange, or transfer of all or substantially all of the assets of the Company, approval by the shareholders of any plan or proposal for liquidation or dissolution of the Company, the acquisition by any person (as such term is used in Sections 13(d) and 14(d)(2) of the Securities Exchange Act of 1934, as amended) of beneficial ownership of 30% or more of the Company's outstanding common stock, or a change in the board of directors of the Company during any period of two consecutive years such that individuals who at the beginning of such period constituted the entire Board of Directors cease for any reason to constitute a majority (with certain exceptions).

In addition, we have an agreement with Dr. Jain providing that upon the occurrence of a change in control, in conjunction with a change in Dr. Jain's current position, other than by voluntary resignation, Dr. Jain will have the option to request the Company to purchase from him a number of shares of his common stock equal to up to 4% of the shares of common stock outstanding immediately prior to the change in control at a price per share equal to the highest per share price paid in connection with the change in control event or the highest price paid in the public market within the twelve months preceding Dr. Jain's exercise of the option. This option is effective for a period of twelve months after the change in control.

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REPORT OF THE COMPENSATION COMMITTEE

During fiscal 2001, the compensation committee of the Board was comprised of Messrs. Franta, Gort, and Von Wald. The compensation committee develops general compensation policies and establishes compensation plans and specific compensation levels for executive officers.

Compensation Policy

In determining the Company's executive compensation policy and levels, the compensation committee seeks to attract and retain qualified executive officers, motivate executive officers to improve the Company's performance, and reward executive officers for individual contributions to the achievement of the Company's business objectives. The committee attempts to achieve these goals by combining annual base salaries with bonuses based on corporate performance and on the achievement of specified performance objectives. The compensation committee believes that cash compensation in the form of salary and bonus provides executives with short-term rewards for success in operations. The compensation committee also believes that long-term compensation through the award of stock options encourages growth in management stock ownership which leads to expansion of management's stake in the long-term performance and success of the Company.

Base Salary. In determining the base salary of each of the executive officers, the Company relies on information regarding salaries paid to executive officers with comparable responsibilities employed by companies with comparable businesses and also takes into account the Company's cash needs. In fiscal 2001, the base salary of the executive officers was increased by an average of 15%.

Bonuses. Annual incentives for the Chief Executive Officer and the other executive officers are intended to reward the attainment of annually established goals in various areas over which the individual officer has significant influence or control, including product development, product manufacturing, sales levels and others. With regard to fiscal 2000, the compensation committee determined that in light of the Company's performance, no executive officer would receive an incentive bonus. As of the mailing of this Proxy Statement, the compensation committee had not yet determined whether incentive bonuses would be paid for fiscal 2001 to the executive officers. This determination is usually made in August. A special bonus was paid to the Chief Executive Officer for his efforts in raising capital for the Company during fiscal 2001.

Stock Options. To date, because the two principal executive officers own a significant percentage of the Company's outstanding common stock, they have not been awarded options. Options have been awarded to other management employees, usually at the time they are hired.

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Compensation of Chief Executive Officer

The compensation committee believes that the compensation of the Chief Executive Officer should reflect the Company's performance. In fiscal 2001, the annual base salary of the Company's Chief Executive Officer was increased to \$175,000, or by 27%. The amount of any bonus paid to the Chief Executive Officer for fiscal 2001 will be based on whether specific performance goals were achieved. For the Chief Executive Officer, these goals were based on sales levels, production of new products, and other related matters. As of the date of mailing of this Proxy Statement, the compensation committee had not determined whether an incentive bonus had been earned by the Chief Executive Officer for fiscal 2001. The Committee determined that the Chief Executive Officer should be paid a special bonus equal to 50% of his then base salary (or \$68,850) in recognition of his efforts in raising capital for the Company during fiscal 2001.

Section 162 Limitation

The compensation committee has considered whether any revisions to the Company's executive compensation policy may be necessary due to provisions of Section 162 of the Internal Revenue Code, which limits to \$1,000,000 the deductibility of compensation paid to certain executives. It is the current policy of the compensation committee to maximize, to the extent reasonably possible, the Company's ability to obtain a corporate tax deduction for compensation paid to executive officers of the Company to the extent consistent with the best interest of the Company and its shareholders. The amendment to the 1997 Stock Compensation Plan limiting the total number of shares that may be subject to awards granted to any individual participant is intended to address this issue with regard to stock options.

William R. Franta                      Michael A. Gort                      Gregory J. Von Wald

Members of the Compensation Committee

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STOCK PERFORMANCE GRAPH

The following performance graph compares the cumulative total returns for the Company's Common Stock, The Nasdaq Stock Market (U.S.) Index and The Nasdaq Non-Financial Index for the period from March 31, 1996 through March 31, 2001. The comparison assumes \$100 was invested in the Company's Common Stock and in each index at the beginning of the period and reinvestment of dividends.

[GRAPHIC OMITTED]

	Cumulative Total Return					
	-----	-----	-----	-----	-----	-----
	3/1996	3/1997	3/1998	3/1999	3/2000	3/2001
APA OPTICS, INC.	100.00	101.15	109.20	128.74	540.23	162.08
NASDAQ STOCK MARKET (U.S.)	100.00	111.15	168.47	227.62	423.37	169.46
NASDAQ NON-FINANCIAL	100.00	107.86	161.78	226.02	442.11	165.15

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CERTAIN RELATIONSHIPS AND TRANSACTIONS

Sublease for Company Facility. Effective December 1, 1984, we entered into a sublease for our office and manufacturing space with Jain-Olsen Properties, a partnership consisting of Anil K. Jain and Kenneth A. Olsen, who are officers, directors, and principal shareholders of the Company. In fiscal 2000, we entered into an Amendment and Extension of the Sublease through November 30, 2004. Certain terms of the sublease are set forth in Note 8 of Notes to Financial Statements included in our 2001 Annual Report, which is being

distributed with this Proxy Statement. We made rent and tax payments under the lease of \$134,581 and \$121,000 to Jain-Olsen Properties during fiscal 2001 and 2000, respectively, and we are obligated to make payments in fiscal 2002 of \$107,280 in rent plus taxes. The sublease will expire in November 2004. We believe the lease terms are at least as favorable to us as terms we could have negotiated with an unrelated third party.

**Key Man Insurance.** We maintain key man insurance in the amount of \$2,000,000 on the life of Anil K. Jain and in the amount of \$500,000 on the life of Kenneth A. Olsen, both of whom are directors and officers. Up to \$500,000 of the proceeds of each policy is intended to be used to purchase shares of our common stock owned by the insured at the request of the personal representative of the insured's estate. The per share price for the repurchase will be the fair market value of the common stock as of the date of the event triggering the repurchase.

**Split Dollar Insurance.** In November 1989, we adopted a split dollar life insurance plan (the "1989 Plan") for the benefit of Anil K. Jain. Under the terms of the 1989 Plan, we pay the premiums on a \$5 million insurance policy (the "Policy") on the lives of Dr. Jain and his spouse. The Policy is a whole life, joint and survivor policy, on which all premiums are paid by us and income is imputed to Dr. Jain in an amount equal to the term rate for his insurance as established by the insurer. No premium payments have been made since January 1996.

The Policy is owned by the Jain Children's Irrevocable Trust dated November 28, 1989 (the "Trust"). The 1989 Plan is designed so that we will recover all premium payments and advances made by us on account of the Policy held by the Trust. Our interest in the premium payments and advances is secured by a collateral assignment of the Policy. Upon the death of the last to die of Dr. Jain and his spouse, we will be reimbursed from the insurance proceeds paid to the Trust in an amount equal to the total premiums and advances made by us. In the event the trustee of the Trust surrenders the Policy for its cash surrender value at some date in the future, we will be reimbursed for the premiums paid on the Policy.

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#### SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Based solely upon a review of Forms 3, 4 and 5 and amendments thereto furnished to the Company and any written representations that no Forms 5 were required, the Company believes that all reports required to be filed by its officers, directors, and greater than 10% beneficial shareholders under Section 16(a) of the Exchange Act were timely filed.

#### RELATIONSHIP WITH INDEPENDENT AUDITORS

Ernst & Young LLP, independent auditors, audited the financial statements of the Company for the fiscal year ended March 31, 2001. The Company anticipates that Ernst & Young LLP will be retained as the Company's independent auditors for fiscal 2001. Representatives of Ernst & Young LLP are expected to be present at the Annual Meeting and will have the opportunity to make a statement, if they desire to do so, and would be available to respond to appropriate questions.

#### REPORT OF AUDIT COMMITTEE

The Audit Committee of the Board of Directors is comprised of three nonemployee directors. The members of the Audit Committee during fiscal 2001 were: Michael A. Gort, chair, William R. Franta and Gregory Von Wald. All members are independent as defined under the rules of The Nasdaq Stock Market.

The Audit Committee held three meetings during fiscal 2001. The meetings were designed to facilitate and encourage communication between the Audit Committee and the internal auditors and the Company's independent auditors, Ernst & Young LLP.

During these meetings, the Audit Committee reviewed and discussed the audited financial statements with management and the auditors.

The discussions with the auditors also included the matters required by Statement on Auditing Standards No. 61 (Communication with Audit Committees). The auditors also provided to the Audit Committee the written disclosures and the letter regarding their independence as required by the Independence Standards Board Standard No. 1. This information was discussed with the auditors.

Based on these discussions, the Audit Committee recommended to the Board of Directors that the audited financial statements for the fiscal year ended March 31, 2001 be included in the Company's annual report on Form 10-K.

The Board of Directors has adopted a written charter for the Audit Committee, which is included as Annex 1 to this proxy statement.

Members of the Audit Committee

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INDEPENDENT AUDITORS' FEES

Audit Services. The Company paid Ernst & Young LLP audit related fees of \$25,750 for the fiscal year ended March 31, 2001. These fees were paid for professional services related to the annual audit and reviews of quarterly financial statements included as part of the Company's Form 10-Q filings for the year and tax preparation.

Information and Technology Services. The Company did not engage Ernst & Young LLP for services related to information technology during the year ended March 31, 2001.

Other Non-Audit Services. For the year ended March 31, 2001, the Company was not billed by Ernst & Young LLP for any non-audit services.

OTHER MATTERS

We are not aware that any matter other than those described in the Notice of Meeting will be presented for action at the meeting. If, however, other matters do properly come before the meeting, it is the intention of Messrs. Jain and Olsen (the persons named as proxies) to vote the proxied shares in accordance with their best judgment on such matters.

SHAREHOLDER PROPOSALS FOR 2001 ANNUAL MEETING

The Company's 2002 Annual Meeting of Shareholders is expected to be held on or about August 21, 2002, and proxy materials in connection with that meeting are expected to be mailed on or about July 15, 2002. In order to be included in the Company's proxy materials for the 2001 Annual Meeting, shareholder proposals prepared in accordance with the proxy rules must be received by the Company on or before March 22, 2002.

In addition, pursuant to the Company's Bylaws, a shareholder must give notice to the Company prior to May 18, 2002 of any nominations for director or any proposal which such shareholder intends to raise at the 2002 Annual Meeting. If the Company receives notice of such nomination or proposal on or after May 18, 2002, such nomination or proposal will not be considered at the annual meeting.

Additionally, if the Company receives notice of a shareholder proposal after June 6, 2002, it will be considered untimely pursuant to SEC Rules 14a-4 and 14a-5(e), and the persons named in the proxies solicited by the Board of Directors for the 2002 Annual Meeting may exercise discretionary voting power with respect to the proposal.

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ADDITIONAL INFORMATION

A copy of the Company's Report to Shareholders for the fiscal year ended March 31, 2001, accompanies this Notice of Annual Meeting and Proxy Statement.

THE COMPANY WILL FURNISH WITHOUT CHARGE A COPY OF ITS ANNUAL REPORT ON FORM 10-K (EXCLUSIVE OF EXHIBITS) FOR THE FISCAL YEAR ENDED MARCH 31, 2001, TO EACH PERSON WHO IS A SHAREHOLDER OF THE COMPANY AS OF JULY 2, 2001, UPON RECEIPT OF A WRITTEN REQUEST FOR SUCH REPORT. SUCH REQUESTS SHOULD BE SENT TO:

APA OPTICS, INC.  
Attention: Secretary  
2950 N.E. 84th Lane  
Blaine, Minnesota 55449

By Order of the Board of Directors

Kenneth A. Olsen  
Secretary

July 20, 2001

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APA OPTICS, INC.  
AUDIT COMMITTEE CHARTER

Annex 1

ORGANIZATION

This charter governs the operations of the audit committee. The committee

shall review and reassess the charter at least annually and obtain the approval of the board of directors. The committee shall be appointed by the board of directors and shall consist of at least three directors, each of whom is independent as defined by the rules of The Nasdaq Stock Market. All committee members shall be financially literate, or shall become financially literate within a reasonable period of time after appointment to the committee, and at least one member shall have accounting or related financial management expertise.

#### STATEMENT OF POLICY

The audit committee shall provide assistance to the board of directors in fulfilling its oversight responsibility to the shareholders and others relating to the Company's financial statements and the financial reporting process, the systems of internal accounting and financial controls, the internal audit function, the annual independent audit of the Company's financial statements, and the legal compliance and ethics programs as established by management and the board. In so doing, it is the responsibility of the committee to maintain free and open communication between the committee and the Company's independent auditors, internal auditors and management. In discharging its oversight role, the committee is empowered to investigate any matter brought to its attention with full access to all books, records, facilities, and personnel of the Company and the power to retain outside counsel or other experts for this purpose.

#### RESPONSIBILITIES AND PROCESSES

The primary responsibility of the audit committee is to oversee the Company's financial reporting process on behalf of the board and report the results of its activities to the board. Management is responsible for preparing the Company's financial statements, and the independent auditors are responsible for auditing those financial statements. The committee in carrying out its responsibilities believes its policies and procedures should remain flexible in order to best react to changing conditions and circumstances. The committee should take the appropriate actions to set the overall corporate "tone" for quality financial reporting, sound business risk practices, and ethical behavior.

The following shall be the principal recurring processes of the audit committee in carrying out its oversight responsibilities. The processes are set forth as a guide with the understanding that the committee may supplement them as appropriate.

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The committee shall have a clear understanding with management and the independent auditors that the independent auditors are ultimately accountable to the board and the audit committee, as representatives of the Company's shareholders. The committee shall have the ultimate authority and responsibility to evaluate and, where appropriate, recommend the replacement of the independent auditors. The committee shall discuss with the auditors their independence from management and the Company and the matters included in the written disclosures required by the Independence Standards Board Standard No.1. Annually, the committee shall review and recommend to the board the selection of the Company's independent auditors.

The committee shall discuss with the internal auditors and the independent auditors the overall scope and plans for their respective audits, including the adequacy of staffing and compensation. The committee shall also discuss with management, the internal auditors, and the independent auditors the adequacy and effectiveness of the accounting and financial controls, including the Company's system to monitor and manage business risk, and legal and ethical compliance programs. Further the committee shall meet separately with the internal auditors and the independent auditors, with and without management present, to discuss the results of their examinations.

The committee shall review the interim financial statements with management and the independent auditors prior to the filing of the Company's Quarterly Report on Form 10-Q. Also, the committee shall discuss the results of the quarterly review and any other matters required to be communicated to the committee by the independent auditors under generally accepted auditing standards. The chair of the committee, or a committee member designated by the chair, may represent the entire committee for the purposes of this review.

The committee shall review with management and the independent auditors the financial statements to be included in the Company's Annual Report on Form 10-K (or the annual report to shareholders if distributed prior to the filing of Form 10-K), including their judgment about the quality, not just acceptability, of accounting principles, the reasonableness of significant judgments, and clarity of the disclosures in the financial statements. Also, the committee shall discuss the results of the annual audit and any other matters required to be communicated to the committee by the independent auditors under generally accepted auditing standards.

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APA OPTICS, INC.  
PROXY  
ANNUAL MEETING OF SHAREHOLDERS - AUGUST 15, 2001

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

The undersigned hereby appoints Anil K. Jain and Kenneth A. Olsen, or either of them, proxies or proxy, with full power of substitution, to vote all shares of Common Stock of APA Optics, Inc. (the "Company") which the undersigned is entitled to vote at the 2001 Annual Meeting of Shareholders to be held at the Four Points Sheraton, 1330 Industrial Boulevard, Minneapolis, Minnesota 55431, August 15, 2001, at 3:30 p.m., Central Daylight Time, and at any adjournment thereof, as directed below with respect to the proposals set forth below, all as more fully described in the Proxy Statement, and upon any other matter that may properly come before the meeting or any adjournment thereof.

1. ELECTION OF DIRECTORS:

FOR all nominees listed                      WITHHOLD AUTHORITY to vote for  
below (except as marked to                  all nominees listed below []  
the contrary below) []

Anil K. Jain, Kenneth A. Olsen, Gregory J. Von Wald, William R. Franta and  
Michael A. Gort

(INSTRUCTION: TO WITHHOLD AUTHORITY FOR ANY INDIVIDUAL NOMINEE, WRITE  
THAT NOMINEE'S NAME IN THE SPACE PROVIDED BELOW.)

2. AMENDMENT OF 1997 STOCK COMPENSATION PLAN:  
[ ] FOR                      [ ] AGAINST                      [ ] ABSTAIN

3. Upon such other matters as may properly come before the meeting.

The power to vote granted by this Proxy may be exercised by Anil K. Jain and Kenneth A. Olsen, jointly or singly, or their substitute(s), who are present and acting at said Annual Meeting or any adjournment of said Annual Meeting. The undersigned hereby revokes any and all prior proxies given by the undersigned to vote at this Annual Meeting.

THIS PROXY WILL BE VOTED IN ACCORDANCE WITH THE SHAREHOLDER'S INSTRUCTIONS. IF THE SHAREHOLDER EXECUTES THIS PROXY BUT DOES NOT PROVIDE INSTRUCTIONS, THIS PROXY WILL BE VOTED FOR THE ELECTION OF THE PROPOSED DIRECTORS AND FOR THE AMENDMENT OF THE 1997 STOCK COMPENSATION PLAN.

It is urgent that each shareholder complete, date, sign, and mail this Proxy as soon as possible. Your vote is important!

Dated and Signed \_\_\_\_\_, 2001

-----  
Signature of Shareholder(s)

-----  
Signature of Shareholder(s)

Please sign as your name(s) appears above. When signing as attorney, executor, administrator, trustee, guardian, authorized officer of a corporation, or partner of a partnership, please provide the name of the entity on whose behalf you are signing and your title.

PLEASE DO NOT FORGET TO DATE THIS PROXY.

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APA OPTICS, INC.

1997 STOCK COMPENSATION PLAN  
(AS AMENDED THROUGH MAY 15, 2001)

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APA OPTICS, INC.

1997 STOCK COMPENSATION PLAN  
(AS AMENDED THROUGH MAY 15, 2001)

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.

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(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.

## 2. Administration. -----

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 750,000 shares of Stock. Such shares may be either authorized and unissued shares or previously issued shares acquired by the Company. The maximum number of shares with respect to which any Participant may receive Awards shall be 200,000 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 750,000. 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. -----

All employees of the Company and any Subsidiary, Parent, or Affiliate, or consultants or advisers to the Company and any Subsidiary, Parent, or Affiliate, are eligible to be granted Awards under the Plan. Consultants and advisers to the Company and/or any Subsidiary, Parent, or Affiliate shall be eligible to be granted Awards under the Plan only if (i) they provide bona fide services to the Company or any Subsidiary, Parent, or Affiliate and (ii) so long as the services provided by such consultants or advisers are not in connection with the offer or sale of securities in a capital-raising transaction and do not directly or indirectly promote or maintain a market for the Company's securities.

### 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.

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(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

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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

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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

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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

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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

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Option and a Nonqualified Stock Option shall not be granted under the Plan.

## 6. Stock Appreciation Rights.

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(a) Grant and Exercise. Stock Appreciation Rights may be granted

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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.

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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  
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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

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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.  
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(a) Administration. Other Awards of Stock or that are valued in whole  
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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.

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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, or

(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

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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

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(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

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(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

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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.

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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

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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.

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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.

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(a)

(i) 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.

(ii) 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.

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(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.

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(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.

12. Effective Date of Plan.

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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.

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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 August 20, 1997.

Amended by the Board of Directors on May 15, 2001 and ratified by the shareholders on \_\_\_\_\_, 2001 to increase the number of shares reserved from 500,000 to 750,000, to increase the number of shares available for incentive stock options from 500,000 to 750,000, to limit the number of shares available for awards to any one participant to 200,000, and to expand the definition of eligible participants to include all employees of and consultants and advisers to the Company and any Subsidiary, Parent, or Affiliate.

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