

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT
OF 1934

For the fiscal year ended October 31, 2001

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES
EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number 0-15451

PHOTRONICS, INC

(Exact name of registrant as specified in its charter)

Connecticut

06-0854886

(State or other jurisdiction of
incorporation of organization)

(IRS Employer
Identification No.)

1061 East Indiantown Road, Jupiter, FL

33477

(Address of principal executive offices)

(Zip Code)

(561) 745-1222

(Registrant's telephone number, including area code)

SECURITIES REGISTERED PURSUANT TO SECTION 12 (b) OF THE ACT:

Title of each class	Name of each exchange on which registered
None -----	-----

SECURITIES REGISTERED PURSUANT TO SECTION 12 (g) OF THE ACT:

Common Stock, \$0.01 par value per share

(Title of Class)

Indicate by check mark whether the registrant (1) has filed all reports
required to be filed by Section 13 or 15(d) of the Securities Exchange Act of
1934 during the preceding 12 months (or for such shorter periods that the
registrant was required to file such reports), and (2) has been subject to such
filing requirements for the past 90 days. Yes No

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

As of December 31, 2001, 30,315,494 shares of the registrant's Common
Stock were outstanding. The aggregate market value of registrant's voting stock
held by non-affiliates of the registrant as of December 31, 2001 was
approximately \$849,291,689.

DOCUMENTS INCORPORATED BY REFERENCE

Proxy Statement for the 2002
Annual Meeting of Shareholders
to be held on March 20, 2002.

Incorporated into Part
III of this Form 10-K.

PART I

ITEM 1. BUSINESS

General

Photronics, Inc. and its subsidiaries (the "Company" or "Photronics") is one of the world's leading manufacturers of photomasks, which are high precision photographic quartz plates containing microscopic images of electronic circuits. Photomasks are a key element in the manufacture of semiconductors and are used as masters to transfer circuit patterns onto semiconductor wafers during the fabrication of integrated circuits and, to a lesser extent, other types of electrical components. The Company operates principally from 11 facilities, five of which are located in the United States, three in Europe and one each in Korea, Singapore and Taiwan.

The Company is a Connecticut corporation, organized in 1969. Its principal executive offices are located at 1061 East Indiantown Road, Jupiter, Florida, 33477, telephone (561) 745-1222.

Fiscal 2001 and Recent Developments

In April 2001, Photronics initiated a plan (the "consolidation plan") to consolidate its global photomask manufacturing network in order to increase capacity utilization and manufacturing efficiencies, as well as to accelerate the expansion of its world-class technology development. The consolidation plan was the final phase of the Company's June 2000 merger with Align-Rite International, Inc. ("Align-Rite"). The principal components of the consolidation plan included the closing of the former Align-Rite manufacturing facilities in Burbank, California, Palm Bay, Florida, and Heilbronn, Germany. The Company recorded consolidation and related charges associated with this plan of \$38.1 million in the second quarter of 2001. A more detailed description of the consolidation plan is contained in Item 7 of Part II of this Form 10-K under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations."

In August 2001, the Company completed the acquisition of a majority equity interest in PKL Co., Ltd. ("PKL"), a leading supplier of photomasks in Korea.

On December 5, 2001, the Company announced its operating results for the fiscal year ended October 31, 2001. During the latter half of 2001, the Company experienced a slow-down in new design releases for mature and high-end technology products and increased competitive pricing pressures for photomasks as a result of the rapid downturn in the global semiconductor industry. A more detailed description of the Company's 2001 operating results is contained in Item 7 of Part II of this Form 10-K under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations."

On December 12, 2001, the Company sold \$200 million of 4.75% Convertible Subordinated Notes due 2006 (the "Notes") in a private offering pursuant to the Securities and Exchange Commission ("SEC") Rule 144A. The Notes are convertible into the Company's common stock at a conversion price equal to \$37.00 per share, subject to adjustment in certain circumstances.

Manufacturing Technology

The Company manufactures photomasks, which are used as masters to transfer circuit patterns onto semiconductor wafers. The Company's photomasks are manufactured in accordance with circuit designs provided on a confidential basis by its customers. The typical manufacturing process for one of the Company's photomasks involves the receipt and conversion of circuit design data to manufacturing pattern data. A lithography system then exposes the circuit pattern onto the photomask. The exposed areas are dissolved and etched to produce that pattern on the photomask. The photomask is inspected for defects and conformity to the customer design data, any defects are repaired, any required pellicles (or protective membranes) are applied and, after final cleaning, the photomask is shipped to the customer.

The Company currently supports customers across the full spectrum of integrated circuit production technologies by manufacturing photomasks using electron beam or laser-based technologies and, to a significantly lesser degree, optical-based technologies. Laser-based and electron beam systems are the predominant technologies used for photomask manufacturing. These technologies are capable of producing the finer line resolution, lighter overlay and larger die size for the larger and more complex circuits currently being designed. Laser and electron beam generated photomasks can be used with the most advanced processing techniques to produce VLSI (very large-scale integrated circuit) devices. The Company currently owns a number of laser and electron beam systems and has committed to purchase additional advanced systems in order to maintain the ability to produce the most complex photomasks. The production of photomasks by the optical method is less expensive and precise. The optical method traditionally is to manufacture less complex and lower priced photomasks.

The first several layers of photomasks sometimes are required to be delivered by the Company within 24 hours from the time it receives a customer's design data. The ability to manufacture high quality photomasks within short time periods is dependent upon efficient manufacturing methods, high yield and high equipment reliability. The Company believes that it meets these requirements by making significant investments in manufacturing and data processing systems and statistical process control methods to optimize the manufacturing process and reduce cycle times.

Quality control is an integral part of the photomask manufacturing process. Photomasks are manufactured in temperature, humidity and particulate controlled clean rooms because of the high level of precision, quality and yields required. Each photomask is inspected several times during the manufacturing process to ensure compliance with customer specifications. The Company continues to make a substantial investment in equipment to inspect and repair photomasks and to ensure that customer specifications are met. After inspection and any necessary repair, the Company utilizes proprietary processes to clean the photomasks prior to shipment.

In the fourth quarter of 2001, the Company announced the opening of its first Advanced Technology Data Center ("ATDC") in Fremont, California. The ATDC centralizes, standardizes, and automates the front-end reticle data preparation process for multiple sites within the Company's manufacturing network.

Sales and Marketing

The market for photomasks primarily consists of domestic and foreign semiconductor manufacturers and designers, including a limited number of manufacturers who have the capability to manufacture photomasks. Generally, the

Company and each of its customers engage in a qualification and correlation process before the Company becomes an approved supplier. Thereafter, the Company typically negotiates pricing parameters for a customer's orders based on the customer's specifications. Some prices may remain in effect for an extended period. In some instances, the Company enters into purchase arrangements, based on the understanding that, as long as the Company's performance is competitive, the Company will receive a specified percentage of that customer's photomask requirements.

The Company conducts its sales and marketing activities primarily through a staff of full-time sales personnel and customer service representatives who work closely with the Company's management and technical personnel. In addition to the sales personnel at the Company's manufacturing facilities, the Company has sales offices throughout the United States, Europe and Asia.

The Company supports international customers through both its domestic and foreign facilities. The Company considers its presence in international markets important to attracting new customers, providing global solutions to its existing customers and serving customers that utilize manufacturing foundries outside of the United States, principally in Asia. For a statement of the amount of net sales, operating income or loss, and identifiable assets attributable to each of the Company's geographic areas of operations, see Note 13 of Notes to the Consolidated Financial Statements.

Customers

The Company primarily sells its products to leading semiconductor manufacturers. The Company's largest customers during fiscal 2001 include the following:

Agere Systems Inc.	Motorola Inc.
ASM Lithography	National Semiconductor Corporation
Atmel Corp.	ON Semiconductor
Chartered Semiconductor Manuf., Ltd.	Philips Semiconductor Manuf., Inc.
Intersil Corporation	Seagate Technology LLC
International Business Machines Corp.	Silicon Systems, Inc.
Linear Technology	ST Microelectronics, Inc.
LSI Logic Corp.	Texas Instruments Incorporated
Macronix International Co., Ltd.	TriQuint Semiconductor
Maxim Integrated Products	United Microelectronics Corp.

The Company, during fiscal year 2001, sold its products and services to approximately 600 customers. During fiscal 2001, no single customer accounted for more than 10% of the Company's net sales. The Company's five largest customers, in the aggregate, accounted for 32% of net sales in fiscal 2001. A significant decrease in the amount of sales to any of these customers could have a material adverse effect on the financial performance and business prospects of the Company.

Research and Development

The Company conducts ongoing research and development programs intended to maintain the Company's leadership in technology and manufacturing efficiency. Since fiscal 1994, the Company has increased its investment in research and development activities and current efforts include deep ultraviolet, phase-shift and optical proximity correction photomasks for advanced semiconductor manufacturing as well as masks for next generation lithography ("NGL") "post-optical" manufacturing technologies. Phase-shift and optical proximity correction

photomasks use advanced lithography techniques for enhanced resolutions of images on a semiconductor wafer. NGL technologies use an alternate exposure source other than the visible spectrum of light for wafer patterning and are designed for the manufacture of integrated circuits with critical dimensions below that believed possible with currently utilized optical exposure methods. Examples of NGL technologies include Extreme Ultraviolet Lithography ("EUV") and Electron Projection Lithography ("EPL"). Post-optical manufacturing technologies are still under development and have not yet been adopted as standard production methods. Since March 1999, NGL research and development has been conducted in connection with our research and development venture with IBM. The Company has incurred expenses of \$24.9 million, \$20.7 million and \$16.6 million for research and development in fiscal 2001, 2000 and 1999, respectively. The Company believes that it owns or controls valuable proprietary information necessary for its business as presently conducted. Recently, the Company has either applied for or been granted patents pertaining to its business segment. The Company believes that its intellectual property is and will continue to be important to the Company's technical leadership in the field of photomasks.

In November 2001, the Company introduced a new proprietary phasemask technology for the passive optical components industry. Phasemasks are used for the production of Fiber Bragg Gratings, which are enabling components in optical networking.

Materials and Supplies

Raw materials used by the Company generally include high precision quartz plates, which are used as photomask blanks, primarily obtained from Japanese suppliers (including Hoya Corporation ["Hoya"], Ulcoat Corporation ["Ulcoat"] and Toppan Printing, Co., Ltd. ["Toppan"]); pellicles, which are protective transparent cellulose membranes; electronic grade chemicals, which are used in the manufacturing process; and compacts, which are durable plastic containers in which photomasks are shipped. These materials are generally available from a limited number of suppliers and the Company is not dependent on any one supplier for its raw materials. The Company believes that its utilization of a broad range of suppliers enables it to access the most advanced material technology available.

The Company has established purchasing arrangements with Hoya, Toppan and Ulcoat, and it is expected that the Company will purchase substantially all of its photomask blanks from these suppliers as long as their price, quality, delivery and service are competitive.

The Company relies on a limited number of equipment suppliers to develop and supply the equipment used in the photomask manufacturing process. Although the Company has been able to obtain equipment on a timely basis, the inability to obtain equipment when required could adversely affect the Company's business and results of operations. The Company also relies on these suppliers to develop future generations of manufacturing systems to support the Company's requirements.

Backlog

The first several levels of a set of photomasks for a circuit pattern sometimes are required to be shipped within 24 hours of receiving a customer's design. Because of the short period between order and shipment dates (typically from one day to two weeks) for a significant amount of the Company's sales, the dollar amount of current backlog is not considered to be a reliable indication of future sales volume.

Competition

The photomask industry is highly competitive and most of the Company's customers utilize more than one photomask supplier. The Company's ability to compete depends primarily upon the consistency of product quality and timeliness of delivery, as well as pricing, technical capability and service. The Company also believes that proximity to customers is an important factor in certain markets. Certain competitors have considerably greater financial and other resources than the Company. The Company believes that it is able to compete effectively because of its dedication to customer service, its investment in state-of-the-art photomask equipment and facilities and its experienced technical employees.

Since the mid-1980s there has been a decrease in the number of independent manufacturers as a result of independents being acquired or discontinuing operations. The Company believes that entry into the market by a new independent manufacturer would require a major investment of capital, a significant period of time to establish a commercially viable operation and additional time to attain meaningful market share and achieve profitability.

The Company estimates that for the type of photomasks it manufactures in North America, the size of the total market (captive and merchant) is approximately \$600 million, and the rest of the world approximately \$1.9 billion. The Company believes that it has a larger share of the United States market than any other photomask manufacturer and, as a result of obtaining a majority equity position in PKL, that it is one of the largest photomask manufacturers in the world. Competitors in the United States include DuPont Photomasks, Inc., and in international markets, Compugraphics, Dai Nippon Printing, DuPont Photomasks, Hoya, Taiwan Mask Corp. and Toppan. In addition, some of the Company's customers, such as IBM, NEC, TSMC and Samsung, possess their own captive facilities for manufacturing photomasks. Also, certain semiconductor manufacturers market their photomask manufacturing services to outside customers as well as to their internal organization.

Employees

As of December 31, 2001, the Company and its majority-owned subsidiaries employed approximately 1,690 persons on a full-time basis. The Company believes it offers competitive compensation and other benefits and that its employee relations are good. Except for employees in the United Kingdom, none of its employees are represented by a union.

ITEM 1A. EXECUTIVE OFFICERS

The names of the executive officers of the Company are set forth below, together with the positions held by each person in the Company. All executive officers are elected annually by the Board of Directors and serve until their successors are duly elected and qualified.

NAME AND AGE -----	POSITION -----	SERVED AS AN OFFICER SINCE -----
Constantine S. Macricostas, 66	Chairman of the Board, Chief Executive Officer and Director	1974
Paul J. Fego, 44	Executive Vice President and Chief Operating Officer	1997
Robert J. Bollo, 57	Senior Vice President and Chief Financial Officer	1994
Steven D. Carlson, 37	Senior Vice President-Technology	1998
Daniel Del Rosario, 55	Senior Vice President-Asia Operations	1996
Jack P. Moneta, 58	Senior Vice President-Planning & Business Development	1997
James A. Eder, 56	Vice President, Secretary and General Counsel	2001
Sean T. Smith, 41	Vice President- Controller	2000

Constantine S. Macricostas was elected to his current position in July 2000. From August 1997 to June 2000, he was the Chairman of the Board. Prior to that date he was the Chief Executive Officer of the Company.

Paul J. Fego was elected Executive Vice President and Chief Operating Officer in December 2001. Prior to that date he had been Senior Vice President, North American Operations since December 1997. Before rejoining Photronics in 1996, Mr. Fego served as Operations Director at ST Microelectronics Inc. in Carrollton, Texas.

Robert J. Bollo was elected Senior Vice President and Chief Financial Officer in July 2000. Prior to that date he had been Vice President and Chief Financial Officer since shortly after joining the Company in 1994.

Steven D. Carlson was elected Senior Vice President, Technology in January 2000. Mr. Carlson is responsible for Process and Product Development, Research, Technical Marketing, Equipment Development and Technology Transfer. Mr. Carlson joined Photronics in 1998 as Vice President, R&D. Prior to joining Photronics, Mr. Carlson spent nine years with Texas Instruments, where he held various engineering and management positions.

Daniel Del Rosario was elected Senior Vice President, Asia Operations in 2001. Prior to that date, he had been Vice President, Asia since 1999 and Vice President, Marketing from 1996 to 1999. Before joining Photronics, Mr. Del

Rosario held management positions in several international semiconductor companies.

Jack P. Moneta has been Senior Vice President-Planning and Business Development since 1997. Mr. Moneta joined Photronics in 1992 as Director of Texas Operations.

James A. Eder has been Vice President, Secretary and General Counsel since January 2001. Prior to that date, he had been Vice President, Secretary, and General Counsel of Kollmorgen Corporation for approximately ten years.

Sean T. Smith has been Vice President and Controller since joining Photronics in April 2000. From 1999 to 2000, Mr. Smith was Vice President and Chief Financial Officer of Carvel Corporation, a closely held soft ice cream manufacturer. He was Controller and Chief Accounting Officer of Starter Corporation, a licensed apparel manufacturer, from 1995 to 1999.

ITEM 2. DESCRIPTION OF PROPERTY

The following table presents certain information about the Company's photomask manufacturing facilities.

LOCATION - - - - -	FACILITY SIZE (SQ. FT.) - - - - -	TYPE OF INTEREST - - - - -
Allen, TX	60,000	Owned
Austin, TX	50,000	Owned
Brookfield, CT (Building #1)	19,600	Owned
Brookfield, CT (Building #2)	20,000	Leased
Milpitas, CA (2 buildings)	49,000	Leased
Phoenix, AZ	30,000	Leased
Bridgend, South Wales	27,115	Owned
Cheonan, Korea	23,000	Leased
Dresden, Germany	10,000	Leased
Hsinchu, Taiwan	73,000	Leased
Manchester, England	42,000	Owned
Singapore	20,000	Leased

As part of the Company's consolidation plan, the Company closed the former Align-Rite manufacturing facilities in Burbank, California, Palm Bay, Florida, and Heilbronn, Germany. In addition, the Company leases office space in several domestic and foreign locations. The Company believes that its existing manufacturing facilities are adequate for further plant expansion at existing sites.

The leased property in Brookfield, Connecticut, is leased from entities controlled by Constantine S. Macricostas under fixed lease rates which were determined by reference to fair market value rates at the beginning of the lease term. Mr. Macricostas is Chairman of the Board, Chief Executive Officer and a Director of the Company.

ITEM 3. LEGAL PROCEEDINGS

The Company is subject to various claims that arise in the ordinary course of business. The Company believes such claims, individually or in the aggregate, will not have a material adverse effect on the business of the Company.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of the Company's security holders during the fourth quarter of fiscal 2001.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED SHAREHOLDERS' MATTERS

The Common Stock of the Company is traded on the NASDAQ National Market System (NMS) under the symbol PLAB. The table below shows the range of high and low sale prices per share for each quarter for fiscal year 2001 and 2000, as reported on the NASDAQ NMS.

	High	Low
	-----	-----
Fiscal Year Ended October 31, 2001:		
Quarter Ended January 31, 2001	\$37.00	\$15.25
Quarter Ended April 30, 2001	38.44	20.19
Quarter Ended July 31, 2001	31.50	17.50
Quarter Ended October 31, 2001	25.60	16.85
Fiscal Year Ended October 31, 2000:		
Quarter Ended January 30, 2000	\$36.13	\$18.13
Quarter Ended April 30, 2000	46.50	23.94
Quarter Ended July 31, 2000	33.69	19.25
Quarter Ended October 31, 2000	30.00	15.38

On December 31, 2001, the closing sale price for the Common Stock as reported by NASDAQ was \$31.35. Based on information available to the Company, the Company believes it has approximately 9,000 beneficial shareholders.

The Company has not paid any cash dividends to date and, for the foreseeable future, anticipates that earnings will continue to be retained for use in its business.

ITEM 6. SELECTED FINANCIAL DATA

The following selected financial data, which has been adjusted as if Align-Rite was a consolidated, wholly owned subsidiary of the Company for all periods presented, is derived from the Company's consolidated financial statements. The data should be read in conjunction with the consolidated financial statements and notes thereto and other financial information included elsewhere in this Form 10-K. All share and per share amounts have been adjusted for a two-for-one stock split for shareholders of record on November 17, 1997.

	Years Ended				
	October 31, 2001 (a)	October 31, 2000 (b)	October 31, 1999	November 1, 1998 (c)	November 2, 1997
	(in thousands, except per share amounts)				
OPERATING DATA:					
Net sales	\$377,969	\$331,212	\$277,395	\$269,293	\$235,452
Costs and expenses:					
Cost of sales	254,272	220,650	193,467	170,864	145,032
Selling, general and administrative	53,758	46,059	40,119	36,235	31,012
Research and development	24,858	20,731	16,611	13,402	10,938
Consolidation, restructuring and related charges	38,100 (d)	23,000 (e)	-	3,800	-
Operating income	6,981	20,772	27,198	44,992	48,470
Other income (expense):					
Interest expense	(11,966)	(11,091)	(7,731)	(6,703)	(2,706)
Interest and other income, net	2,664	5,783	3,335	4,581	4,053
Income (loss) before income taxes (benefit) and minority interest	(2,321)	15,464	22,802	42,870	49,817
Income tax provision (benefit)	(3,000)	4,700	8,354	16,288	18,856
Minority interest in income of consolidated subsidiaries	(4,705)	(588)	-	-	-
Net income (loss)	\$(4,026)	\$10,176	\$14,448	\$26,582	\$30,961
Earnings (loss) per share:					
Basic	\$(0.13) (d)	\$ 0.35 (e)	\$ 0.52	\$ 0.95	\$ 1.12
Diluted	\$(0.13) (d)	\$ 0.34 (e)	\$ 0.51	\$ 0.92	\$ 1.07
Weighted average number of common shares outstanding:					
Basic	29,919	28,761	27,800	28,123	27,638
Diluted	29,919	29,831	28,105	33,093	30,707
	October 31, 2001	October 31, 2000	October 31, 1999	November 1, 1998	November 2, 1997
BALANCE SHEET DATA:					
Working capital	\$ 48,732	\$ 78,393	\$ 33,484	\$ 43,506	\$ 92,125
Property, plant and equipment	402,776	395,281	348,144	282,964	225,902
Total assets	673,538	615,972	502,309	421,702	403,993
Long-term debt	188,021	202,797	148,281	104,261	106,194
Shareholders' equity	287,161	293,980	254,130	238,196	217,348

(a) Effective August 27, 2001, the Company acquired a majority of the total share capital of PKL Ltd. ("PKL"), a photomask manufacturer based in Korea. The operating results of PKL have been included in the consolidated statement of operations since the effective date of the acquisition.

(b) Effective June 20, 2000, the Company acquired a majority of the total share capital of Precision Semiconductor Mask Corporation (PSMC), a photomask manufacturer based in Taiwan. The operating results of PSMC have been included in the consolidated statement of operations since the effective date of the acquisition.

(c) On December 31, 1997, the Company acquired the internal photomask manufacturing operations of Motorola, Inc. in Mesa, Arizona. The consolidated statement of operations data includes the results of the former final phase of Motorola photomask operations since the effective date of the acquisition.

(d) Includes consolidation charges of \$38.1 million (\$26.1 million after tax, or \$0.87 per diluted share) in connection with the final phase of the Company's merger with Align-Rite International, Inc. and subsequent consolidation of facilities in California, Florida and Germany.

(e) Includes restructuring and related charges incurred in connection with the closure of the Company's Sunnyvale, California and Neuchatel, Switzerland facilities and merger related expenses totaling \$14.8 million (after tax) or \$0.52 per diluted share.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Results of Operations for the Years Ended
October 31, 2001, 2000 and 1999

Overview

In 2001, the Company completed the acquisition of a majority equity interest in PKL Co. Ltd. ("PKL"), a leading Korean photomask supplier for an aggregate purchase price of \$56 million. Prior to 2001, the Company owned approximately 6% of PKL. The acquisition was accounted for as a purchase. The operating results of PKL have been included in the Company's consolidated statement of operations since August 27, 2001. In August 2001, the Company acquired the photomask manufacturing assets of Conexant Systems, Inc., a semiconductor manufacturer based in Newport Beach, California.

In June 2000, the Company completed its merger with Align-Rite International, Inc. ("Align-Rite"), an independent publicly traded manufacturer of photomasks in the United States and Europe. Under the terms of the Merger Agreement, each of the 4,731,232 shares of common stock of Align-Rite issued and outstanding as of June 7, 2000 was converted into 0.85 shares of common stock of Photronics. Cash was paid in lieu of the issuance of any fractional shares of Photronics that would otherwise have been issued. Any stock options to acquire Align-Rite common stock that had not been exercised as of June 7, 2000 became fully vested options to acquire Photronics common stock in accordance with the merger agreement. The Company recorded expenses of \$5.5 million in fiscal 2000 relating to costs incurred in connection with this transaction. Such costs consisted primarily of fees for investment bankers, attorneys, accountants, financial printing and other related charges. The transaction was accounted for as a pooling-of-interests. Accordingly, the consolidated financial statements, the accompanying notes and this management's discussion and analysis have been restated to reflect the Company's financial position, results of operations and cash flows as if Align-Rite was a consolidated, wholly-owned subsidiary of the Company for all periods presented.

In June 2000, the Company acquired a majority share of Precision Semiconductor Mask Corporation (PSMC), a photomask manufacturer based in Taiwan, for approximately \$63.4 million in cash. The acquisition was accounted for as a purchase. The operating results of PSMC have been included in the Company's consolidated statement of operations from June 20, 2000.

The Company's growth in recent years has also been affected by the rapid technological changes taking place in the semiconductor industry resulting in a greater mix of high-end photomask requirements for more complex integrated circuit designs. In 1999 and early 2000, the Company experienced a weakness in selling prices for more mature technologies, but experienced an increase in unit volumes and a better mix of orders for high-end technology products. During the latter half of 2001, the Company was impacted by the severe and rapid downturn in the semiconductor industry which resulted in decreased demand and increased competitive pressures. The Company cannot predict the duration of such cyclical industry conditions or their impact on its future operating results.

Both revenues and costs have been affected by the increased demand for high-end technology photomasks that require more advanced manufacturing capabilities but generally command higher average selling prices. To meet the technological demands of its customers and position the Company for future growth, the Company continues to make substantial investments in high-end manufacturing capability both at existing and new facilities. The Company's capital expenditures for new facilities and equipment to support its customers' requirements for high technology products exceeded \$175 million for the three years ended October 31, 2001, resulting in significant increases in operating expenses. Based on the anticipated technological changes in the industry, the Company expects these trends to continue.

The Company believes that changes in photomask demand reflect changes in semiconductor design activity and are only indirectly affected by changes in semiconductor sales volumes. In the past, increased design activity has been stimulated by both the rapid development of new generation semiconductor designs and the proliferation of application-specific integrated circuits.

Results of Operations

The following table represents selected operating information expressed as a percentage of net sales:

	Years Ended		
	October 31, 2001	October 31, 2000	October 31, 1999
Net sales	100.0%	100.0%	100.0%
Cost of sales	67.3	66.6	69.7
Gross margin	32.7	33.4	30.3
Selling, general and administrative expenses	14.2	13.9	14.5
Research and development expenses	6.6	6.3	6.0
Operating income before consolidation, restructuring, and related charges	11.9%	13.2%	9.8%

Net Sales

Net sales for the fiscal year ended October 31, 2001 increased 14.1% to \$378.0 million, compared to \$331.2 million in 2000, as a result of our continued global expansion. By geographic area, the growth in net sales was primarily attributed to Asia where net sales increased \$39.3 million or 123.0%. European sales increased \$5.6 million or 9.5% and North American sales increased \$1.9 million or 0.8%. Other factors contributing to the increased sales during 2001 include an improved sales mix of high-end technology products, which have higher average selling prices and increased unit volume associated with increased design releases. These increases were primarily experienced during the first half of the year. During the latter half of 2001, the Company experienced a slow-down in new design releases for mature and high-end technology products and increased competitive pricing pressures for photomasks as a result of the rapid downturn in the global semiconductor industry. The Company continues to see weaknesses in selling prices for mature technologies but has benefited from its investments in high-end manufacturing capability and increased global presence.

Net sales for the fiscal year ended October 31, 2000, increased 19.4% to \$331.2 million, compared to \$277.4 million in 1999. The increase was primarily attributable to an improved sales mix of high-end technology products which have higher average selling prices, increased unit volume associated with increased design releases and continued global expansion of the Company's manufacturing network.

Gross Margin

Gross margin for the year ended October 31, 2001 decreased to 32.7% from 33.4% for the year ended October 31, 2000. The decrease in 2001 was primarily attributable to the rapid downturn in the semiconductor industry which affected the Company during the last six months of 2001. During the first half of 2001 the Company's gross margin was 36.0% as a result of a greater mix of higher margin products and higher utilization of the Company's fixed equipment base. During the second half of 2001 the Company's gross margin decreased to 29.0% as a result of the decreased demand and reduced utilization of the Company's fixed equipment base. The decreased demand was somewhat mitigated by efficiencies realized from the Company's 2001 consolidation plan. Additionally, improved gross margins at the Company's subsidiary in Taiwan were partially offset by lower margins from the Company's newly acquired Korean subsidiary.

Gross margin for the year ended October 31, 2000 increased to 33.4% compared to 30.3% in 1999 principally because of improved absorption of fixed costs from higher sales, a greater mix of high-end technology products, increased capacity utilization associated with increased unit volumes, and efficiencies realized from the Company's 2000 restructuring. The increase was partially mitigated by lower gross margins at the Company's subsidiary in Taiwan.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the year ended October 31, 2001 increased 16.7% to \$53.8 million, or 14.2% of net sales, from \$46.1 million, or 13.9% of net sales for the year ended October 31, 2000. The increase in 2001 was primarily attributable to the Company's continued global expansion, both domestically and internationally, including additional costs associated with our Asian investments, and the increased information technology and data communication costs associated with our global network.

Selling, general and administrative expenses increased 14.8% during fiscal year 2000 to \$46.1 million, or 13.9% of net sales, compared with \$40.1 million, or 14.5% of net sales in fiscal year 1999. The higher expenses were due principally to increased staffing and other support costs associated with the Company's continued global expansion, including the costs incurred in Taiwan and growth of the Company's communication and information technology infrastructure.

Research and Development

Research and development expenses for the year ended October 31, 2001, increased 19.9% to \$24.9 million, or 6.6% of net sales, from \$20.7 million, or 6.3% of net sales in 2000. The increase in fiscal year 2001 is attributable to the continuing development efforts of high-end process technologies for advanced, sub wavelength reticle solutions, primarily in the United States and Taiwan, and in Next Generation Lithography (NGL) applications.

Research and development expenses for the year ended October 31, 2000, increased by 24.8% to \$20.7 million, or 6.3% of net sales, from \$16.6 million or 6.0% of net sales in 1999. This increase reflects the continuing development of the Company's proprietary process technologies such as Nano Range II and Ultra Res, and its advanced, more complex photomasks such as phase shift, optical proximity correction and NGL applications.

Consolidation, Restructuring and Related Charges

In April 2001, the Company initiated a plan ("the consolidation plan") to consolidate its global photomask manufacturing network in order to increase capacity utilization and manufacturing efficiencies, as well as to accelerate the expansion of its world-class technology development. The Company initiated the consolidation plan as the final phase of its June 2000 merger with Align-Rite. Total consolidation and related charges associated with this plan of \$38.1 million were recorded in the second quarter of 2001. Of the total charge, \$30.6 million related to the consolidation plan and \$7.5 million related to the impairment of intangible assets.

The significant components of the consolidation plan included the closing of the former Align-Rite manufacturing facilities in Burbank, California, Palm Bay, Florida and Heilbronn, Germany. The Company anticipates that the closing of these facilities will maximize capacity utilization at its remaining facilities. As part of the plan, the Company reduced its work force by approximately 120 employees.

The consolidation charge of \$30.6 million includes: \$4.0 million of cash charges for severance benefits for terminated employees paid during their entitlement periods, principally during the fourth quarter of 2001; \$4.5 million for facilities closings and lease termination costs expended over the projected lease terms; and non-cash charges of \$22.1 million that approximate the carrying value of fixed assets that are primarily associated with the consolidation plan based upon their expected disposition. Through October 31, 2001 cash charges of approximately \$3.0 million had been expended.

The charges also included \$7.5 million that were related to the impairment in value of associated intangible assets. It was determined during the period that such assets no longer had any future economic benefit to the Company because the anticipated undiscounted cumulative cash flows from these assets were insufficient to support their carrying value.

During March 2000, the Company implemented a plan to restructure its mature products group in order to increase capacity utilization, manufacturing efficiencies and customer service activities worldwide. Total charges associated with this restructuring plan of \$17.5 million were recorded in the second quarter of 2000. Of the total charge, \$9.1 million related to restructuring and \$8.4 million related to the impairment of intangible assets.

The significant components of the restructuring plan included the closing of the Company's Sunnyvale, California and Neuchatel, Switzerland manufacturing facilities and the consolidation and regionalization of sales and customer service functions. As part of the plan, the Company reduced its work force by approximately 125 employees. The restructuring charge of \$9.1 million includes \$1.5 million of cash charges for severance benefits paid to terminated employees which was disbursed over their entitlement period and \$2.3 million for facilities closings and lease termination costs expended through the first quarter of 2001. Additionally, non-cash charges of \$5.3 million approximated the carrying value primarily of fixed assets associated with the manufacturing restructuring based upon their expected disposition. Such assets, consisting principally of specialized manufacturing tools and equipment, were subsequently taken out of service.

The charge also included \$8.4 million related to the impairment in value of associated intangible assets. It was determined during the period that such assets no longer had future economic benefit to the Company because the anticipated undiscounted cumulative cash flows from these assets were insufficient to support their carrying value.

Other Income and Expense

Interest expense for the year ended October 31, 2001 increased by \$0.9 million to \$12.0 million as compared to \$11.1 million for 2000. The increase is primarily the result of additional borrowings associated with the Company's investments in Asia, partially offset by lower effective borrowing rates. Investment and other income, net, during 2001 decreased by \$3.1 million to \$2.7 million as compared to \$5.8 million in 2000 primarily because there were no investment sales in 2001.

For the year ended October 31, 2000, interest expenses increased by \$3.4 million to \$11.1 million. The increased expense is associated with additional borrowings, principally associated with the PSMC acquisition. Investment and other income, net, increased by \$2.4 million to \$5.8 million as a result of increased gains on investment sales.

Income Taxes

For the year ended October 31, 2001 the Company recorded a tax benefit of \$3.0 million or 42.7% of the pretax loss. The loss was a result of the Company's consolidation plan charge, which primarily impacted U.S. tax rates.

The Company provided federal, state and foreign income taxes at a combined effective annual tax rate of 31.6% in 2000, compared to 36.6% in 1999. The lower rate in 2000 was primarily due to higher income in countries where the Company has government granted tax exemptions, together with higher research and development and other tax credits.

Minority Interest in Consolidated Subsidiaries

The minority interest charge of \$4.7 million in fiscal 2001 and \$0.6 million in fiscal 2000, reflects the portion of income attributable to the minority shareholders of the Company's non-wholly owned subsidiaries in Asia.

Net Income (Loss) and Earnings (Loss) Per Share

For the year ended October 31, 2001 the Company incurred a net loss of \$4.0 million or (\$0.13) per diluted share compared to net income of \$10.2 million or \$0.34 per diluted share in fiscal 2000. Net income, excluding the effects of consolidation, restructuring and related charges for 2001 and 2000, decreased to \$22.1 million or \$0.74 per diluted share in fiscal 2001 compared to \$25.0 million or \$0.86 per diluted share for fiscal 2000.

Net income for the year ended October 31, 2000, decreased to \$10.2 million, or \$0.34 per diluted share, compared to \$14.4 million, or \$0.51 per diluted share in 1999. Fiscal year 2000 includes the effect of the consolidation, restructuring and related charges amounting to \$14.8 million after tax, or \$0.52 per diluted share.

Liquidity and Capital Resources

The Company's working capital at October 31, 2001 was \$48.7 million compared with \$78.4 million at October 31, 2000. The decrease in working capital is primarily associated with increased short-term debt of the Company's new majority-owned subsidiary in Korea. Cash and cash equivalents at October 31, 2001 were \$34.7 million compared to \$38.2 million at October 31, 2000. Cash provided by operating activities for the year ended October 31, 2001 was \$113.6 million compared to \$49.6 million for the year ended October 31, 2000. The increase is primarily related to increased accounts payable and accruals of \$9.9 million, increased depreciation and amortization of \$16.1 million and increased net income from operations, exclusive of consolidation, restructuring and related charges of \$6.4 million.

Cash used by investing activities of \$98.6 million consisted principally of the acquisition of a majority share of PKL in Korea together with capital equipment purchases. The Company expects capital expenditures for 2002 to be approximately \$125.0 million. Capital expenditures for 2002 will be used primarily to continue to expand the Company's high-end technical capability.

Cash used in financing activities of \$17.0 million consisted principally of \$24.8 million of net repayments of borrowings, partially offset by proceeds of \$7.8 million from the issuance of common stock.

The Company's commitments represent investments in additional manufacturing capacity as well as advanced equipment for the production of high-end, more complex photomasks. At October 31, 2001, the Company had commitments outstanding for capital expenditures of approximately \$81 million. Additional commitments for capital requirements are expected to be incurred during fiscal 2002. At October 31, 2001 the Company was not in compliance with the covenant in its \$125 million revolving credit agreement that required a defined minimum interest coverage ratio for a trailing four-quarter period. At October 31, 2001 the Company had

\$58.3 million outstanding under the revolving credit agreement. On December 12, 2001 the Company sold \$200 million of 4.75% Convertible Subordinated Notes due 2006 ("Notes") in a private offering pursuant to SEC Rule 144A. The Notes are convertible into the Company's common stock at a conversion price of \$37.00 per share. Total net proceeds from the issuance amounted to approximately \$193.5 million. Concurrent with the issuance of Notes, on December 12, 2001 the Company repaid all of the outstanding borrowings under the revolving credit agreement which amounted to \$57.7 million and terminated the agreement. The Company intends to obtain a new revolving credit agreement during 2002, although there can be no assurance that it will be successful. The Company believes that its currently available resources, together with its capacity for substantial growth and its accessibility to other debt and equity financing sources, are sufficient to satisfy its cash requirements for the foreseeable future.

Effect of New Accounting Standards

In June 2001 the FASB issued Statement of Financial Accounting Standards ("SFAS") No. 142, "Goodwill and Other Intangible Assets." The Company will adopt this new standard beginning November 1, 2001. With the adoption of SFAS No. 142, goodwill is no longer subject to amortization over its estimated useful life, but will be subject to an annual assessment for impairment by applying a fair-value-based test. The Company anticipates that the adoption of this new standard will result in the discontinuation of annual goodwill amortization of approximately \$1.5 million in 2002.

In October 2001, the FASB issued SFAS No. 144 "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS 144 becomes effective for the Company's financial statements issued for fiscal year 2003. The Company does not expect the pronouncement to have a material impact on its consolidated financial position, consolidated results of operations or consolidated cash flows.

ITEM 7A QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The Company records derivatives on the balance sheet as assets or liabilities, measured at fair value. Gains or losses resulting from changes in the values of those derivatives are reported in the Statement of Operations or as Accumulated Other Comprehensive Income (Loss), a separate component of Shareholders' Equity, depending on the use of the derivatives and whether they qualify for hedge accounting. In order to qualify for hedge accounting, the derivative must be highly effective in achieving offsetting changes in fair value or cash flows of the hedged items during the term of the hedge. In general, the types of risks hedged are those relating to the variability of future cash flows caused by movements in foreign currency exchange rates. The Company documents its risk management strategy and hedge effectiveness at the inception of and during the term of each hedge.

In fiscal year 2001, the Company entered into forward currency contracts to hedge transactions to purchase equipment to be settled in Japanese Yen. Such derivatives have been designated and qualify as cash flow hedging instruments and are reported at fair value. The Company has not recognized any net gains or losses from its forward currency contracts, as these hedges are highly effective, and the forecasted purchase of equipment will occur within 12 months. Therefore, any gains or losses are included in Accumulated Other Comprehensive Income (Loss) and will be amortized as a charge to earnings over the life of the related equipment. Cash flow hedges of forecasted transactions resulted in an aggregate debit balance of \$431,000 in Accumulated Other Comprehensive Income (Loss) at October 31, 2001. All forecasted transactions currently being hedged are expected to occur within 12 months.

Foreign Currency Exchange Rate Risk

The Company conducts business in several major international currencies through its worldwide operations and is subject to changes in foreign exchange rates of such currencies. Changes in exchange rates can positively or negatively affect the Company's sales, gross margins and retained earnings. The Company attempts to minimize currency exposure risk by producing its products in the same country or region in which the products are sold and thereby generating revenues and incurring expenses in the same currency and by managing its working capital; there can be no assurance that this approach will be successful, especially in the event of a significant and sudden decline in the value of any of the international currencies of the Company's worldwide operations. The Company does not engage in purchasing forward exchange contracts for speculative purposes.

Interest Rate Risk

The majority of the Company's borrowings are in the form of its convertible subordinated notes, which bear interest rates ranging from 4.75% to 6.0% and secured notes payable which bear interest between approximately 4.5% and 7.3%. The Company does not expect changes in interest rates to have a material effect on income or cash flows in 2002, although there can be no assurances that interest rates will not change significantly.

Forward Looking Information

Certain statements in this report are considered "forward looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. All forward-looking statements involve risks and uncertainties. In particular, any statement contained in this Annual Report on Form 10-K, in press releases, written statements or other documents filed with the Securities and Exchange Commission, or in the Company's communications and discussions with investors and analysts in the normal course of business through meetings, phone calls and conference calls, regarding the consummation and benefits of future acquisitions, expectations with respect to future sales, financial performance, operating efficiencies and product expansion, are subject to known and unknown risks, uncertainties and contingencies, many of which are beyond the control of the Company. These factors may cause actual results, performance or achievements to differ materially from anticipated results, performances or achievements. Factors that might affect such forward looking statements include, but are not limited to, overall economic and business conditions; the demand and receipt of orders for the Company's products; competitive factors in the industries and geographic markets in which the Company competes; changes in federal, state and foreign tax requirements (including tax rate changes, new tax laws and revised tax law interpretations); the Company's ability to place new equipment in service on a timely basis; interest rate fluctuations and other capital market conditions, including foreign currency rate fluctuations; economic and political conditions in international markets; the ability to obtain a new bank facility or other financings; the ability to achieve anticipated synergies and other cost savings in connection with acquisitions and productivity programs; the timing, impact and other uncertainties of future acquisitions; the seasonal and cyclical nature of the semiconductor industry; the availability of capital; management changes; damage or destruction to our facilities by natural disasters, labor strikes, political unrest or terrorist activity; the ability to fully utilize its tools; the ability of the Company to receive desired yields, pricing, product mix, and market acceptance of its products; and changes in technology. Any forward-looking statements should be considered in light of these factors.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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INDEPENDENT AUDITORS' REPORT

Board of Directors and Shareholders
Photronics, Inc.
Jupiter, Florida

We have audited the accompanying consolidated balance sheets of Photronics, Inc. and subsidiaries as of October 31, 2001 and 2000, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the three years in the period ended October 31, 2001. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Photronics, Inc. and subsidiaries as of October 31, 2001 and 2000, and the results of their operations and their cash flows for each of the three years in the period ended October 31, 2001, in conformity with accounting principles generally accepted in the United States of America.

DELOITTE & TOUCHE LLP
Hartford, Connecticut
December 7, 2001,
(December 12, 2001 as to Note 17)

PHOTRONICS, INC. AND SUBSIDIARIES

Consolidated Balance Sheet
(in thousands, except share amounts)

Assets	October 31, 2001	October 31, 2000
-----	-----	-----
Current assets:		
Cash and cash equivalents	\$ 34,684	\$ 38,182
Accounts receivable (less allowance for doubtful accounts of \$1,000 in 2001 and \$880 in 2000)	70,704	64,019
Inventories	21,492	18,486
Deferred income taxes	20,052	8,610
Other current assets	4,464	4,711
	-----	-----
Total current assets	151,396	134,008
Property, plant and equipment, net	402,776	395,281
Intangible assets, net	93,199	59,277
Deferred income taxes	12,840	10,996
Investments and other assets	13,327	16,410
	-----	-----
	\$673,538	\$615,972
	=====	=====
Liabilities and Shareholders' Equity		

Current liabilities:		
Current portion of long-term debt and notes payable	\$ 33,918	\$ 849
Accounts payable	37,142	37,917
Accrued salaries and wages	6,443	5,264
Interest payable	3,386	2,720
Income taxes payable	7,092	3,037
Restructuring and other accrued liabilities	14,683	5,828
	-----	-----
Total current liabilities	102,664	55,615
Long-term debt	188,021	202,797
Deferred income taxes	38,190	33,292
Other liabilities	12,492	3,162
	-----	-----
Total liabilities	341,367	294,866
	-----	-----
Minority interest	45,010	27,126
	-----	-----
Commitments and contingencies		
Shareholders' equity:		
Preferred stock, \$0.01 par value, 2,000 shares authorized, none issued and outstanding	-	-
Common stock, \$0.01 par value, 75,000 shares authorized, 30,276 shares issued and outstanding at October 31, 2001 and 29,688 shares issued and outstanding at October 31, 2000	303	297
Additional paid-in capital	146,378	136,445
Retained earnings	163,220	167,246
Accumulated other comprehensive loss	(22,740)	(9,877)
Deferred compensation on restricted stock	-	(131)
	-----	-----
Total shareholders' equity	287,161	293,980
	-----	-----
	\$ 673,538	\$ 615,972
	=====	=====

See accompanying notes to consolidated financial statements.

PHOTRONICS, INC. AND SUBSIDIARIES
Consolidated Statement of Operations
(in thousands, except per share amounts)

	Years Ended		
	October 31, 2001	October 31, 2000	October 31, 1999
Net sales	\$ 377,969	\$ 331,212	\$ 277,395
Costs and expenses:			
Cost of sales	254,272	220,650	193,467
Selling, general and administrative	53,758	46,059	40,119
Research and development	24,858	20,731	16,611
Consolidation, restructuring and related charges	38,100	23,000	-
Operating income	6,981	20,772	27,198
Other income (expense):			
Interest expense	(11,966)	(11,091)	(7,731)
Investment and other income, net	2,664	5,783	3,335
Income (loss) before provision (benefit) for income taxes and minority interest	(2,321)	15,464	22,802
Income tax provision (benefit)	(3,000)	4,700	8,354
Income before minority interest	679	10,764	14,448
Minority interest in income of consolidated subsidiaries	(4,705)	(588)	-
Net income (loss)	\$ (4,026)	\$ 10,176	\$ 14,448
Earnings (loss) per share:			
Basic	\$(0.13)	\$ 0.35	\$ 0.52
Diluted	\$(0.13)	\$ 0.34	\$ 0.51
Weighted average number of common shares outstanding:			
Basic	29,919	28,761	27,800
Diluted	29,919	29,831	28,105

See accompanying notes to consolidated financial statements.

PHOTRONICS, INC. AND SUBSIDIARIES

Consolidated Statement of Shareholders' Equity
 Years Ended October 31, 2001, 2000 and 1999
 (in thousands)

	Common Stock		Add'l Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)			Deferred Compen- sation on Re- stricted Stock	Total Share- holders' Equity	
	Shares	Amount			Unreal- ized Invest- ment Gains	Cash Flow Hedges	Foreign Currency Trans- lation			total
Balance at November 1, 1998	27,958	\$280	\$100,973	\$138,885	\$1,167	-	\$(2,970)	\$(1,803)	\$(139)	\$238,196
Comprehensive Income:										
Net income	-	-	-	14,448	-	-	-	-	-	14,448
Adjustment to reflect Align-Rite's results for the period from April 1, 1998 to September 30, 1998	-	-	-	3,596	-	-	-	-	-	3,596
Change in unrealized gains on investments	-	-	-	-	1,357	-	-	1,357	-	1,357
Foreign currency translation adjustment	-	-	-	-	-	-	(2,125)	(2,125)	-	(2,125)
Total comprehensive income (loss)				18,044	1,357		(2,125)	(768)		17,276
Sale of common stock through employee stock option and purchase plans	467	4	5,466	-	-	-	-	-	-	5,470
Amortization of re- stricted stock to compensation expense	-	-	-	-	-	-	-	-	88	88
Common stock repurchases	(500)	(5)	(6,895)	-	-	-	-	-	-	(6,900)
Balance at October 31, 1999	27,925	279	99,544	156,929	2,524	-	(5,095)	(2,571)	(51)	254,130
Comprehensive Income:										
Net income	-	-	-	10,176	-	-	-	-	-	10,176
Change in unrealized gains on investments	-	-	-	-	2,776	-	-	2,776	-	2,776
Adjustment to reflect Align- Rite's results for the period from October 1, 1999 to October 31, 1999	-	-	-	141	-	-	-	-	-	141
Foreign currency translation adjustment	-	-	-	-	-	-	(10,082)	(10,082)	-	(10,082)
Total comprehensive income (loss)				10,317	2,776		(10,082)	(7,306)		3,011
Sale of common stock in private placement	1,000	10	21,831	-	-	-	-	-	-	21,841
Sale of common stock through employee stock option and purchase plans	763	8	14,809	-	-	-	-	-	-	14,817
Restricted stock awards, net of amortization to compensation expense	-	-	261	-	-	-	-	-	(80)	181
Balance at October 31, 2000	29,688	297	136,445	167,246	5,300		(15,177)	(9,877)	(131)	293,980
Comprehensive Income:										
Net income (loss)	-	-	-	(4,026)	-	-	-	-	-	(4,026)
Change in unrealized gains on investments	-	-	-	-	(2,318)	-	-	(2,318)	-	(2,318)
Change in fair value of cash flow hedges	-	-	-	-	-	(431)	-	(431)	-	(431)
Foreign currency translation adjustment	-	-	-	-	-	-	(10,114)	(10,114)	-	(10,114)
Total comprehensive income (loss)	-	-	-	(4,026)	(2,318)	(431)	(10,114)	(12,863)		(16,889)

Sale of common stock through employee stock option and purchase plans	588	6	9,933	-	-	-	-	-	-	9,939
Amortization of restricted stock to compensation expense	-	-	-	-	-	-	-	-	131	131
Balance at October 31, 2001	<u>30,276</u>	<u>\$303</u>	<u>\$146,378</u>	<u>\$163,220</u>	<u>\$2,982</u>	<u>\$(431)</u>	<u>\$(25,291)</u>	<u>\$(22,740)</u>	<u>-</u>	<u>\$287,161</u>

See accompanying notes to consolidated financial statements.

PHOTRONICS, INC. AND SUBSIDIARIES
Consolidated Statement of Cash Flows
(in thousands)

	Years Ended		
	October 31, 2001	October 31, 2000	October 31, 1999
Cash flows from operating activities:			
Net income (loss)	\$(4,026)	\$ 10,176	\$ 14,448
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization of property, plant and equipment	67,502	53,322	45,015
Amortization of intangible assets	5,473	3,546	2,783
Gain on sale of investments	-	(6,430)	(1,479)
Deferred income taxes	(6,031)	1,251	8,104
Restructuring and related charges	38,100	17,500	-
Other	(631)	2,398	387
Changes in assets and liabilities, net of effects of acquisitions:			
Accounts receivable	(205)	(3,591)	(12,084)
Inventories	1,353	596	(109)
Other current assets	2,276	(1,171)	(1,910)
Accounts payable and accrued liabilities	9,768	(28,009)	9,852
Net cash provided by operating activities	113,579	49,588	65,007
Cash flows from investing activities:			
Acquisitions of and investments in photomask operations, net of cash acquired	(48,864)	(37,312)	(13,525)
Deposits on and purchases of property, plant and equipment	(48,670)	(43,599)	(83,719)
Net change in short-term investments	-	-	7,532
Proceeds from sale of investments	-	6,706	1,578
Other	(1,026)	(135)	(7,817)
Net cash used in investing activities	(98,560)	(74,340)	(95,951)
Cash flows from financing activities:			
Net borrowings (repayments) of long-term debt	(24,828)	10,376	27,971
Proceeds from issuance of common stock	7,765	32,424	5,084
Purchase and retirement of common stock	-	-	(6,900)
Other	52	-	(201)
Net cash provided by (used in) financing activities	(17,011)	42,800	25,954
Effect of exchange rate changes on cash	(1,506)	493	101
Net increase (decrease) in cash and cash equivalents	(3,498)	18,541	(4,889)
Cash and cash equivalents at beginning of year	38,182	23,115	29,364
Adjustment related to Align-Rite's net cash flows resulting from differences in fiscal reporting periods	-	(3,474)	(1,360)
Cash and cash equivalents at end of year	\$ 34,684	\$ 38,182	\$ 23,115

See accompanying notes to consolidated financial statements.

PHOTRONICS, INC. AND SUBSIDIARIES

Notes to Consolidated Financial Statements
Years Ended October 31, 2001, 2000 and 1999
(in thousands, except per share amounts)

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Consolidation

The accompanying Consolidated Financial Statements include the accounts of Photronics, Inc. and its majority-owned subsidiaries ("Photronics" or "Company"), in which the Company exercises control. All significant intercompany balances and transactions have been eliminated. Certain prior year amounts have been reclassified to conform to the current year presentation.

Cash and Cash Equivalents

Cash and cash equivalents include cash and highly liquid investments purchased with an original maturity of three months or less. The carrying values approximate fair value based on the short maturity of the instruments.

Derivative Investments and Hedging Activities

The Company records derivatives on the balance sheet as assets or liabilities, measured at fair value. Gains or losses resulting from changes in the values of those derivatives are reported in the Statement of Operations or as Accumulated Other Comprehensive Income (Loss), a separate component of Shareholders' Equity, depending on the use of the derivatives and whether they qualify for hedge accounting. In order to qualify for hedge accounting, the derivative must be highly effective in achieving offsetting changes in fair value or cash flows of the hedged items during the term of the hedge.

Investments

The Company's equity investments are classified as available-for-sale, and carried at fair value. Unrealized gains and losses, net of tax, are reported as other comprehensive income (loss) as a separate component of shareholders' equity. Gains and losses are included in income when realized, determined based on the disposition of specifically identified investments.

Inventories

Inventories, principally raw materials, are stated at the lower of cost, determined under the first-in, first-out (FIFO) method, or market.

Long-Lived Assets

Property, plant and equipment are recorded at cost less accumulated depreciation. Repairs and maintenance as well as renewals and replacements of a routine nature are charged to operations as incurred, while those which improve or extend the lives of existing assets are capitalized. Upon sale or other disposition, the cost of the asset and accumulated depreciation are eliminated from the accounts, and any resulting gain or loss is reflected in income.

For financial reporting purposes, depreciation and amortization are computed on the straight-line method over the estimated useful lives of the related assets. Buildings and improvements are depreciated over 15 to 40 years, machinery and equipment over 3 to 10 years and furniture, fixtures and office equipment over 3 to 5 years. Leasehold improvements are amortized over the life of the lease or the estimated useful life of the improvement, whichever is less.

Intangible Assets

Intangible assets consist primarily of goodwill and other acquisition-related intangibles, and software development costs. These assets are stated at fair value as of the date incurred less accumulated amortization. Amortization is calculated on a straight-line basis over estimated useful lives of 3 to 15 years for goodwill and acquisition-related assets, and over 5 years for software development costs. The future economic benefit of the carrying value of all intangible assets is reviewed periodically and any diminution in useful life or impairment in value based on future anticipated undiscounted cash flows would be recorded in the period so determined.

In June 2001, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards ("SFAS") No. 142, "Goodwill and Other Intangible Assets." The Company will adopt this new standard beginning November 1, 2001. With the adoption of SFAS No. 142, goodwill is no longer subject to amortization over its estimated useful life, but will be subject to an annual assessment for impairment by applying a fair-value-based test. The Company anticipates that the adoption of this new standard will result in the discontinuation of annual goodwill amortization of approximately \$1.5 million in 2002.

Income Taxes

The provision for income taxes is computed on the basis of consolidated financial statement income. Deferred income taxes reflect the tax effects of differences between the carrying amounts of assets and liabilities for financial reporting and the amounts used for income tax purposes.

Earnings Per Share

Basic EPS is based on the weighted average number of common shares outstanding for the period, excluding any dilutive common share equivalents. Diluted EPS reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted.

Stock Based Compensation

The Company records stock option awards in accordance with the provisions of Accounting Principles Board Opinion 25, "Accounting for Stock Issued to Employees." The Company estimates the fair value of stock option awards in accordance with SFAS No. 123, "Accounting for Stock-Based Compensation," and discloses the resulting estimated compensation effect on net income on a pro forma basis.

Foreign Currency Translation

The Company's foreign subsidiaries maintain their accounts in their respective local currencies. Assets and liabilities of such subsidiaries are translated to U.S. dollars at year-end exchange rates. Income and expenses are translated at average rates of exchange prevailing during the year. Foreign currency translation adjustments are accumulated and reported as other comprehensive income (loss) as a separate component of shareholders' equity. The effects of changes in exchange rates on foreign currency transactions are included in income.

Revenue Recognition

The Company recognizes revenue upon shipment of goods to customers.

NOTE 2 - BUSINESS COMBINATIONS

Acquisition of PKL Ltd.

In 2001 the Company completed the acquisition of a majority of the total share capital (approximately 51%) of PKL Ltd. ("PKL"), a photomask manufacturer based in Korea for approximately \$56 million. The acquisition was accounted for as a purchase in accordance with SFAS No. 141 "Business Combinations." Accordingly, a portion of the purchase price has been allocated to assets acquired and liabilities assumed based upon estimated fair value at the date of acquisition, while the balance of \$38.6 million was recorded as goodwill. The purchase price allocation is preliminary and further refinements are likely to be made upon the completion of the final valuation. The operating results of PKL have been included in the Consolidated Statement of Operations from August 27, 2001, the date the Company acquired majority share. Pursuant to an agreement with certain shareholders of PKL, the Company may acquire an additional 1,000,000 shares, or approximately 32%, of PKL.

The following table presents unaudited consolidated pro forma information as if the acquisition of PKL had occurred as of the beginning of the periods presented:

	Years Ended	
	October 31, 2001	October 31, 2000
Net sales	\$416,274	\$378,386
Net income (loss)	\$ (2,021)	\$ 12,479
Diluted earnings (loss) per share	\$ (0.07)	\$ 0.42

In management's opinion, these unaudited consolidated pro forma amounts are not necessarily indicative of what the actual combined results of operations might have been had the acquisition of PKL occurred at the beginning of the periods presented.

The purchase price of approximately \$56 million was allocated to the net assets acquired based on estimates of their fair values at the date of the acquisition which included current assets of \$22.8 million, property, plant, equipment and other assets of \$54.3 million, current liabilities of \$37.8 million (including \$33.8 million of currently payable debt) and long-term debt of \$5.0 million.

Acquisition of PSMC

Effective June 20, 2000, the Company acquired a majority of the total share capital of Precision Semiconductor Mask Corporation (PSMC), a photomask manufacturer based in Taiwan, for approximately \$63.4 million. The acquisition was accounted for as a purchase. Accordingly, a portion of the purchase price has been allocated to assets acquired and liabilities assumed based upon estimated fair value at the date of acquisition, while the balance of \$31.2 million was recorded as goodwill. The operating results of PSMC have been included in the Consolidated Statement of Operations from the date of acquisition.

The following table presents unaudited consolidated pro forma information as if the acquisition of PSMC had occurred as of the beginning of the periods presented:

	Years Ended	
	October 31, 2000	October 31, 1999
Net sales	\$ 343,248	\$ 292,246
Net income	\$ 6,508	\$ 5,735
Diluted earnings per share	\$ 0.22	\$ 0.20

In management's opinion, these unaudited consolidated pro forma amounts are not necessarily indicative of what the actual combined results of operations might have been if the acquisition of PSMC had been effective at the beginning of the periods presented.

Align-Rite Merger

On June 7, 2000, Photronics completed its merger with Align-Rite International, Inc. ("Align-Rite"). Under the terms of the merger agreement, each of the 4,731,232 shares of common stock of Align-Rite issued and outstanding as of June 7, 2000 was converted into .85 shares of common stock of Photronics. Cash was paid in lieu of the issuance of any fractional shares of Photronics that would otherwise have been issued. Any stock options to acquire Align-Rite common stock that had not been exercised as of June 7, 2000 became fully vested options to acquire Photronics common stock in accordance with the Merger Agreement. The merger constituted a tax-free reorganization and has been accounted for as a pooling-of-interests. Accordingly, the consolidated financial statements for each of the two years ended October 31, 2000 and 1999 and the accompanying notes thereto reflect the Company's financial position, results of operations and cash flows as if Align-Rite had been a wholly-owned subsidiary of Photronics for all periods presented. Prior to the merger, Align-Rite's fiscal year ended on March 31.

The Company recorded a pre-tax charge of approximately \$5.5 million for transaction costs incurred in connection with the merger. Such costs consisted primarily of fees for investment bankers, attorneys, accountants, financial printing and other related charges.

NOTE 3 - INVESTMENTS

There were no short-term investments at October 31, 2001 or 2000.

Investments primarily consist of available-for-sale equity securities of publicly traded technology companies. The fair values of available-for-sale investments are based upon quoted market prices. For investments with no quoted market price, the estimated fair value is based upon the financial condition and the operating results and projections of the investee and is considered to approximate cost. Unrealized gains on investments were determined as follows:

	October 31, 2001	October 31, 2000
Fair value	\$ 6,658	\$12,797
Cost	1,851	4,249
	-----	-----
Less deferred income taxes	4,807	8,548
	1,825	3,248
	-----	-----
Net unrealized gains	\$ 2,982	\$ 5,300
	=====	=====

NOTE 4 - PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consists of the following:

	October 31, 2001	October 31, 2000
Land	\$ 3,129	\$ 4,438
Buildings and improvements	32,090	45,701
Machinery and equipment	602,790	529,237
Leasehold improvements	20,331	14,801
Furniture, fixtures and office equipment	35,596	32,530
	-----	-----
	693,936	626,707
Less accumulated depreciation and amortization	291,160	231,426
	-----	-----
	\$ 402,776	\$ 395,281
	=====	=====

NOTE 5 - INTANGIBLE ASSETS

Intangible Assets consist of the following:

	October 31, 2001	October 31, 2000
	-----	-----
Goodwill	\$ 89,687	\$ 52,220
Software development costs	11,984	11,984
Other	5,033	4,446
	-----	-----
	106,704	68,650
Less accumulated amortization	13,505	9,373
	-----	-----
	<u>\$ 93,199</u>	<u>\$ 59,277</u>
	=====	=====

NOTE 6 - LONG-TERM DEBT

Long-term debt consists of the following:

	October 31, 2001	October 31, 2000
	-----	-----
Borrowings under revolving credit facilities	\$ 58,311	\$ 68,675
6% Convertible Subordinated Notes due June 1, 2004	103,300	103,400
Debt of non-wholly owned subsidiaries:		
10.7% Bond Payable, due October 2002	11,613	-
Secured notes payable	35,677	31,144
Other	260	427
	-----	-----
	209,161	203,646
Less current portion	21,140	849
	-----	-----
Long-term debt	<u>\$ 188,021</u>	<u>\$ 202,797</u>
	=====	=====

Long-term debt matures as follows: 2003 - \$8,463; 2004 - \$163,871; 2005 - \$2,687 and 2006 - \$13,000. The fair value of long-term debt not yet substantively extinguished is estimated based on the current rates offered to the Company and is not significantly different from carrying value, except that the fair value of the convertible subordinated notes, based upon the most recently reported trade as of October 31, 2001, amounted to \$110.9 million.

At October 31, 2001 the Company had an unsecured revolving credit facility to provide for borrowings of up to \$125 million at any time through November 2003. The Company is charged a commitment fee on the average unused amount of the available credit. The effective interest rate for fiscal 2001 was approximately 6.3%. The revolving credit facility was amended on June 12, 2001, in order to modify certain financial covenants and definitions in connection with the Company's consolidation plan. The Company was subject to compliance with and maintenance of certain financial covenants and ratios set forth in the credit facility, as amended. At October 31, 2001, the Company was not in compliance with the revolving credit facility's minimum interest coverage ratio. On December 12, 2001, the Company repaid all of the outstanding borrowings under that facility which amounted to \$57.7 million and terminated the facility. The Company has classified the revolving credit facility as a long-term liability as it has the intent and ability to refinance or replace this obligation with other long-term debt (see Note 17).

On May 29, 1997, the Company sold \$103.5 million of convertible subordinated notes, due in 2004, in a public offering. The notes bear interest at 6% per annum and are convertible at any time by the holders into 3.7 million shares of the Company's common stock, at a conversion price of \$27.97 per share. The notes are redeemable at the Company's option, in whole or in part, at certain premiums decreasing through the maturity date. Interest is payable semi-annually.

The 10.7% bond payable and secured notes payable are obligations of non-wholly owned subsidiaries and are not guaranteed by the Company. Secured notes payable consist primarily of collateralized equipment loans with interest rates ranging from approximately 4.5% to 7.3% and are repayable in monthly installments through May 2006.

Cash paid for interest amounted to \$11,006, \$11,724 and \$7,123 in 2001, 2000 and 1999, respectively.

NOTE 7 - EARNINGS PER SHARE

A reconciliation of basic and diluted EPS as follows:

	Net Income (Loss) -----	Average Shares Outstanding -----	Earnings (Loss) Per Share -----
2001:			
Basic	\$ (4,026)	29,919	\$(0.13)
Effect of potential dilution from exercise of stock options	-	-	-
	-----	-----	-----
Diluted	\$ (4,026)	29,919	\$(0.13)
	=====	=====	=====
2000:			
Basic	\$ 10,176	28,761	\$ 0.35
Effect of potential dilution from exercise of stock options	-	1,070	-
	-----	-----	-----
Diluted	\$ 10,176	29,831	\$ 0.34
	=====	=====	=====
1999:			
Basic	\$ 14,448	27,800	\$ 0.52
Effect of potential dilution from exercise of stock options	-	305	-
	-----	-----	-----
Diluted	\$ 14,448	28,105	\$ 0.51
	=====	=====	=====

The effect of the potential conversion of notes into 3.7 million shares of common stock would be anti-dilutive for all years presented. If the assumed conversion of convertible subordinated notes and stock options had been dilutive, the incremental additional shares outstanding would have been 4,453 in 2001, 3,700 in 2000 and 4,185 in 1999.

NOTE 8 - INCOME TAXES

The provision (benefit) for income taxes consists of the following:

	2001	2000	1999
	-----	-----	-----
Current:			
Federal	\$ 619	\$ 1,344	\$ (774)
State	127	54	205
Foreign	2,285	2,051	819
	-----	-----	-----
	3,031	3,449	250
	-----	-----	-----
Deferred:			
Federal	(7,078)	1,498	6,935
State	(913)	(12)	786
Foreign	1,960	(235)	383
	-----	-----	-----
	(6,031)	1,251	8,104
	-----	-----	-----
	\$(3,000)	\$ 4,700	\$ 8,354
	=====	=====	=====

The provision (benefit) for income taxes differs from the amount computed by applying the statutory U.S. Federal income tax rate to income before taxes as a result of the following:

	2001	2000	1999
	-----	-----	-----
U.S. Federal income tax at statutory rate of 35%	\$ (810)	\$ 5,413	\$ 7,981
State income taxes, net of federal benefit	(770)	23	965
Other, net	(1,420)	(736)	(592)
	-----	-----	-----
	\$(3,000)	\$ 4,700	\$ 8,354
	=====	=====	=====

The Company's net deferred income tax liability consists of the following:

	October 31, 2001	October 31, 2000
	-----	-----
Deferred income tax assets:		
Reserves not currently deductible	\$ 3,653	\$ 2,516
Net operating losses	14,585	1,889
Tax credit carry forwards	3,614	1,114
Intercompany transactions	5,105	3,295
Intangible amortization	3,362	1,589
Non qualified stock options	956	23
Other	1,617	9,180
	-----	-----
Total deferred income tax asset	\$32,892	\$19,606
	=====	=====
Deferred income tax liabilities:		
Property, plant and equipment	31,551	24,902
Investments	1,825	3,248
Research and development costs	948	1,297
Other	3,866	3,845
	-----	-----
Total deferred income tax liability	\$38,190	\$33,292
	=====	=====
Net deferred income tax liability	\$ 5,298	\$13,686
	=====	=====

Cash paid for income taxes amounted to \$2.0 million, \$0.9 million and \$2.9 million in 2001, 2000 and 1999 respectively.

The Company has a net operating loss carryover to 2002 totaling \$35.2 million, of which \$5.0 million expires in 2020 and \$30.2 million expires in 2021. The Company expects to fully utilize these carryforwards, thus a deferred income tax asset has been established.

Deferred income taxes of approximately \$23.6 million at October 31, 2001 were not provided on undistributed earnings of foreign subsidiaries because such undistributed earnings are expected to be reinvested indefinitely.

The Company records a deferred tax benefit from the exercise of non-qualified stock options as an addition to additional paid in capital.

NOTE 9 - EMPLOYEE STOCK PURCHASE AND OPTION PLANS

In 2000, the shareholders approved the adoption of the 2000 Stock Option Plan which includes provisions allowing for the award of qualified and non-qualified stock options and the granting of restricted stock awards. A total of one million shares of common stock may be issued pursuant to options or restricted stock awards granted under the Plan. Restricted stock awards do not require the payment of any cash consideration by the recipient, but shares subject to an award may be forfeited unless conditions specified in the grant are satisfied.

The Company has previously adopted other stock option plans under which incentive and non-qualified stock options and restricted stock awards may be granted. All plans provide that the exercise price may not be less than the fair market value of the common stock at the date the options are granted and limit the term of options granted to a maximum of ten years.

The following table summarizes stock option activity for each of the three years ended October 31, 2001 under the plans:

	Stock Options	Exercise Prices		
	-----	-----	-----	-----
Balance at November 1, 1998	3,056,242	\$0.94	-	\$31.44
Granted	359,106	11.91	-	25.88
Exercised	(430,660)	0.94	-	21.97
Cancelled	(156,488)	0.94	-	31.44

Balance at October 31, 1999	2,828,200	\$0.94	-	\$31.44
Granted	848,281	22.13	-	27.88
Exercised	(646,464)	0.94	-	22.38
Cancelled	(236,351)	3.08	-	31.44

Balance at October 31, 2000	2,793,666	\$0.94	-	\$31.44
Granted	352,950	16.12	-	27.34
Exercised	(428,092)	0.94	-	31.44
Cancelled	(131,287)	11.00	-	31.44

Balance at October 31, 2001	2,587,237			
	=====			

The following table summarizes information concerning currently outstanding and exercisable options as of October 31, 2001:

	Range of Exercise Prices		
	-----	-----	-----
	\$0.94 - 10.00	\$10.00 - 20.00	\$20.00 - 31.44
	-----	-----	-----
Outstanding:			
Number of options	330,264	1,001,383	1,255,590
Weighted average remaining years	3.2	6.5	8.1
Weighted average exercise price	\$4.61	\$13.72	\$23.26
Exercisable:			
Number of options	330,264	677,171	404,385
Weighted average exercise price	\$4.61	\$12.88	\$23.14

At October 31, 2001, 592,225 shares were available for grant and 1,411,820 shares were exercisable at a weighted average exercise price of \$13.88.

The Company has not recognized compensation expense in connection with stock option grants under the plans. However, had compensation expense been determined based on the fair value of the options on the grant dates, the Company's pro forma net (loss) income and earnings (loss) per share would have been increased by approximately \$(0.4) million, or \$(0.01) per diluted share in 2001, by approximately \$1.4 million, or \$0.05 per diluted share in 2000, and by approximately \$2.7 million, or \$0.10 per diluted share in 1999. The weighted average fair value of options granted was \$18.66 per share in 2001, \$23.76 per share in 2000 and \$17.52 per share in 1999. Fair value is estimated based on the Black-Scholes option-pricing model with the following weighted average assumptions: dividend yield of 0%; expected volatility of 75.2% in 2001, 68.8% in 2000, and 67.1% in 1999; and risk-free interest rates of 6.0% in 2001, 7.5% in 2000 and 6.2% in 1999.

The Company maintains an Employee Stock Purchase Plan ("Purchase Plan"), under which 600,000 shares of common stock were reserved for issuance. The Purchase Plan enables eligible employees to subscribe, through payroll deductions, to purchase shares of the Company's common stock at a purchase price equal to 85% of the lower of the fair market value on the commencement date of the offering and the last day of the payroll payment period. At October 31, 2001, 151,246 shares had been issued and 62,131 shares were subject to outstanding subscriptions under the Purchase Plan.

NOTE 10 - EMPLOYEE BENEFIT PLANS

The Company maintains a 401(k) Savings and Profit-Sharing Plan (the "Plan") which covers all domestic employees who have completed six months of service and are eighteen years of age or older. Under the terms of the Plan, an employee may contribute up to 15% of their compensation, which will be matched by the Company at 50% of the employee's contributions, which are not in excess of 4% of the

employee's compensation. Employee and employer contributions vest fully upon contribution. Employer contributions amounted to \$0.9 million in 2001, \$0.9 million in 2000, and \$0.6 million in 1999.

The Company maintains a cafeteria plan to provide eligible domestic employees with the option to receive non-taxable medical, dental, disability and life insurance benefits. The cafeteria plan is offered to all active full-time domestic employees and their qualifying dependents. The Company's contribution amounted to \$5.7 million in 2001, \$5.4 million in 2000 and \$4.5 million in 1999.

The Company's foreign subsidiaries maintain benefit plans for their employees, which vary by country. The obligations and cost of these plans are not significant to the Company.

NOTE 11 - LEASES

The Company leases various real estate and equipment under non-cancelable operating leases. Rental expense under such leases amounted to \$1.6 million in 2001, \$2.2 million in 2000 and \$4.9 million in 1999.

Future minimum lease payments under non-cancelable operating leases with initial or remaining terms in excess of one year amounted to \$8.3 million at October 31, 2001, as follows:

2002.....\$1,473	2005.....\$1,288
2003.....\$1,337	2006.....\$1,204
2004.....\$1,266	Thereafter.....\$1,773

NOTE 12 - COMMITMENTS AND CONTINGENCIES

At October 31, 2001 the Company had capital expenditure purchase commitments outstanding of approximately \$81 million. The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make certain estimates and assumptions, including collectibility of accounts receivable, depreciable lives and recoverability of property, plant and equipment, intangible assets and certain accrued liabilities. Actual results may differ from such estimates.

Financial instruments that potentially subject the Company to credit risk consist principally of trade receivables and temporary cash investments. The Company sells its products primarily to manufacturers in the semiconductor and computer industries in North America, Europe and Asia. The Company believes that the concentration of credit risk in its trade receivables is substantially mitigated by the Company's ongoing credit evaluation process and relatively short collection terms. The Company does not generally require collateral from customers. The Company establishes an allowance for doubtful accounts based upon factors surrounding the credit risk of specific customers, historical trends and other information. Historically, the Company has not incurred any significant credit-related losses.

In fiscal year 2001, the Company entered into forward currency contracts to hedge transactions to purchase equipment to be settled in Japanese Yen. Such derivatives have been designated and qualify as cash flow hedging instruments and are reported at fair value. The Company has not recognized any net gains or losses from its forward currency contracts, as these hedges are highly effective, and the forecasted purchase of equipment will occur within 12 months. Therefore, any gains or losses are included in Accumulated Other Comprehensive Income (Loss) and will be amortized as a charge to earnings over the life of the related equipment. Cash flow hedges of forecasted transactions resulted in an aggregate debit balance of \$431,000 in Accumulated Other Comprehensive Income (Loss) at October 31, 2001. All forecasted transactions currently being hedged are expected to occur within 12 months.

NOTE 13 - SEGMENT INFORMATION

The Company operates in a single industry segment as a manufacturer of photomasks, which are high precision quartz plates containing microscopic images of electronic circuits for use in the fabrication of semiconductors. In addition to its manufacturing facilities in the United States, the Company has operations in the United Kingdom, Germany, Switzerland, Singapore, Taiwan, and Korea. The Company's 2001, 2000 and 1999 net sales, operating income (loss) and identifiable assets by geographic area were as follows:

	Net Sales	Operating Income (Loss)	Identifiable Assets
	-----	-----	-----
2001:			
North America	\$241,873	\$(12,980)	\$345,546
Europe	64,809	7,905	94,818
Asia	71,287	12,056	233,174
	-----	-----	-----
	\$377,969	\$ 6,981	\$673,538
	=====	=====	=====
2000:			
North America	\$240,013	\$ 9,599	\$423,926
Europe	59,211	7,143	93,727
Asia	31,988	4,030	98,319
	-----	-----	-----
	\$331,212	\$ 20,772	\$615,972
	=====	=====	=====
1999:			
North America	\$216,342	\$ 25,237	\$364,818
Europe	48,403	3,746	107,522
Asia	12,650	(1,785)	29,969
	-----	-----	-----
	\$277,395	\$ 27,198	\$502,309
	=====	=====	=====

Approximately 4% of net domestic sales in 2001 were for delivery outside of the United States (4% in 2000 and 5% in 1999).

During fiscal 2001 and 2000, no single customer accounted for more than 10% of the Company's net sales. In fiscal 1999, two customers each represented approximately 10% of total net sales.

NOTE 14 - COMPREHENSIVE INCOME (LOSS)

The Company's comprehensive income (loss) as reported in the Consolidated Statement of Shareholders' Equity, consists of net earnings (losses) and all changes in equity during a period except those resulting from investments by owners and distributions to owners, which are presented before-tax. The Company does not provide for U.S. income taxes on foreign currency translation adjustments. Accumulated other comprehensive income (loss) consists of unrealized gains and losses on certain investments in equity securities and foreign currency translation adjustments. The related tax effects allocated to each component of other comprehensive income (loss) were as follows for the three years ended October 31, 2001:

	Before-Tax Amount -----	Tax (Expense) or Benefit -----	Net-of-Tax Amount -----
2001:			
Foreign currency translation adjustment	\$(10,114)	\$ -	\$(10,114)
Loss on change in fair value of cash flow hedge	(431)		(431)
Unrealized holding losses arising during the period	(4,803)	2,485	(2,318)
Other comprehensive loss	\$(15,348)	\$ 2,485	\$(12,863)
	=====	=====	=====
2000:			
Foreign currency translation adjustment	\$(10,082)	\$ -	\$(10,082)
Unrealized gains on investments: Unrealized holding gains arising during the period	10,499	(3,318)	7,181
Less: reclassification adjustment for gains realized in net income	(6,430)	2,025	(4,405)
Net unrealized gains	4,069	(1,293)	2,776
Other comprehensive loss	\$ (6,013)	\$ (1,293)	\$ (7,306)
	=====	=====	=====
1999:			
Foreign currency translation adjustment	\$ (2,125)	\$ -	\$ (2,125)
Unrealized gains on investments: Unrealized holding gains arising during the period	4,574	(1,738)	2,836
Less: reclassification adjustment for gains realized in net income	(2,385)	906	(1,479)
Net unrealized gains	2,189	(832)	1,357
Other comprehensive income (loss)	\$ 64	\$ (832)	\$ (768)
	=====	=====	=====

NOTE 15 - CONSOLIDATION, RESTRUCTURING AND RELATED CHARGES

In April 2001, the Company initiated a plan ("the consolidation plan") to consolidate its global photomask manufacturing network in order to increase capacity utilization and manufacturing efficiencies, as well as to accelerate the expansion of its world-class technology development. The Company initiated the consolidation plan as the final phase of its June 2000 merger with Align-Rite. Total consolidation and related charges associated with this plan of \$38.1 million were recorded in the second quarter of 2001. Of the total charge, \$30.6 million related to the consolidation plan and \$7.5 million related to the impairment of intangible assets.

The significant components of the consolidation plan included the closing of the former Align-Rite manufacturing facilities in Burbank, California, Palm Bay, Florida and Heilbronn, Germany. The Company anticipates that the closing of these facilities will maximize capacity utilization at its remaining facilities. As part of the plan, the Company reduced its work force by approximately 120 employees.

The consolidation charge of \$30.6 million includes: \$4.0 million of cash charges for severance benefits for terminated employees paid during their entitlement periods, principally during the fourth quarter of 2001; \$4.5 million for facilities closings and lease termination costs expended over the projected lease terms; and non-cash charges of \$22.1 million that approximate the carrying value of fixed assets that are primarily associated with the consolidation plan based upon their expected disposition. Through October 31, 2001 cash charges of approximately \$3.0 million had been expended.

The charges also included \$7.5 million that were related to the impairment in value of associated intangible assets. It was determined during the period that such assets no longer had any future economic benefit to the Company because the anticipated undiscounted cumulative cash flows from these assets were insufficient to support their carrying value.

During March 2000, the Company implemented a plan to restructure its mature products group in order to increase capacity utilization, manufacturing efficiencies and customer service activities worldwide. Total charges associated with this restructuring plan of \$17.5 million were recorded in the second quarter of 2000. Of the total charge, \$9.1 million related to restructuring and \$8.4 million related to the impairment of intangible assets.

The significant components of the restructuring plan included the closing of the Company's Sunnyvale, California and Neuchatel, Switzerland manufacturing facilities and the consolidation and regionalization of sales and customer service functions. As part of the plan, the Company reduced its work force by approximately 125 employees. The restructuring charge of \$9.1 million includes \$1.5 million of cash charges for severance benefits paid to terminated employees which was disbursed over their entitlement period and \$2.3 million for facilities closings and lease termination costs expended through the first quarter of 2001. Additionally, non-cash charges of \$5.3 million approximated the carrying value primarily of fixed assets associated with the manufacturing restructuring based upon their expected disposition. Such assets, consisting principally of specialized manufacturing tools and equipment, were subsequently taken out of service.

The charge also included \$8.4 million related to the impairment in value of associated intangible assets. It was determined during the period that such assets no longer had future economic benefit to the Company because the anticipated undiscounted cumulative cash flows from these assets were insufficient to support their carrying value.

NOTE 16 - QUARTERLY RESULTS OF OPERATIONS (UNAUDITED)

The following table sets forth certain unaudited quarterly financial data:

	First	Second	Third	Fourth	Year (a)
2001:					
Net sales	\$98,557	\$100,572	\$85,016	\$93,824	\$377,969
Gross margin	35,328	36,337	24,447	27,585	123,697
Net income (loss)	8,402	(16,191)	1,777	1,986	(4,026)
Earnings (loss) per share:					
Basic	\$0.28	\$(0.54)	\$0.06	\$0.07	\$(0.13)
Diluted	\$0.28	\$(0.54)	\$0.06	\$0.07	\$(0.13)
2000:					(b)
Net sales	\$72,585	\$76,360	\$85,595	\$96,672	\$331,212
Gross margin	22,250	25,228	28,919	34,165	110,562
Net income (loss)	3,531	(5,302)	3,158	8,789	10,176
Earnings (loss) per share:					
Basic	\$0.13	\$(0.19)	\$0.11	\$0.30	\$0.35
Diluted	\$0.13	\$(0.19)	\$0.11	\$0.29	\$0.34

(a) Includes consolidation charges of \$38.1 million (\$26.1 million after tax, or \$0.87 per diluted share), recorded in the second quarter, in connection with the final phase of the Company's merger with Align-Rite International, Inc. and subsequent consolidation of facilities in California, Florida and Germany.

(b) Includes restructuring and related charges, recorded in the second quarter, incurred in connection with the closure of the Company's Sunnyvale, California and Neuchatel, Switzerland facilities and merger related expenses, recorded in the third quarter, totaling \$14.8 million (after tax) or \$0.52 per share.

NOTE 17 - SUBSEQUENT EVENT

At October 31, 2001, the Company was not in compliance with the covenant in its \$125 million revolving credit agreement that required a defined minimum interest coverage ratio for a trailing four-quarter period. At October 31, 2001 the Company had \$58.3 million outstanding under the revolving credit agreement. On December 12, 2001 the Company sold \$200 million of 4.75% Convertible Subordinated Notes due 2006 ("Notes") in a private offering pursuant to SEC Rule 144A. The Notes are convertible into the Company's common stock at a conversion price of \$37.00 per share. Net proceeds from the issuance amounted to approximately \$193.5 million. Concurrent with the issuance of the Notes, on December 12, 2001 the Company repaid all of the outstanding borrowings under the Revolving Credit Agreement which amounted to \$57.7 million and terminated the agreement. The Company intends to obtain a new revolving credit agreement during 2002.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

There were no disagreements on any accounting and financial disclosure matters between the Company and its independent certified public accountants for which a Form 8-K was required to be filed during the 24 months ended October 31, 2001 or for the period from October 31, 2001 to the date hereof.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information as to Directors required by Item 401 and 405 of Regulation S-K is set forth in the Company's definitive proxy statement (the "Definitive Proxy Statement") which will be filed with the Securities and Exchange Commission pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this Form 10-K under the caption "ELECTION OF DIRECTORS" and is incorporated herein by reference. The information as to Executive Officers is included in Part I, Item 1A of this report under the caption "Executive Officers."

ITEM 11. EXECUTIVE COMPENSATION

The information required by Item 402 of Regulation S-K is set forth in the Definitive Proxy Statement under the captions "EXECUTIVE COMPENSATION" and "DIRECTORS' COMPENSATION" and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required by Item 403 of Regulation S-K is set forth in the Definitive Proxy Statement under the caption "OWNERSHIP OF COMMON STOCK BY DIRECTORS, NOMINEES, OFFICERS AND CERTAIN BENEFICIAL OWNERS" and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by Item 404 of Regulation S-K is set forth in the Definitive Proxy Statement under the caption "CERTAIN TRANSACTIONS" and is incorporated herein by reference.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K

(A) The following documents are filed as part of this report:

1) Financial Statements

Independent Auditors' Reports

Consolidated Balance Sheet at October 31, 2001 and 2000

Consolidated Statement of Operations for the years ended October 31, 2001, 2000 and 1999

Consolidated Statement of Shareholders' Equity for the years ended October 31, 2001, 2000 and 1999

Consolidated Statement of Cash Flows for the years ended October 31, 2001, 2000 and 1999

Notes to Consolidated Financial Statements

2) Financial Statement Schedules

Schedules for which provision is made in Regulation S-X of the Securities and Exchange Commission are not required under the related instructions or are inapplicable and, therefore, have been omitted.

3) Exhibits: See Exhibits Index.

(B) Reports on Form 8-K

No reports on Form 8-K were filed by the Company during the fourth quarter ended October 31, 2001.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PHOTRONICS, INC.
(Registrant)

By ROBERT J. BOLLO January 24, 2002
Robert J. Bollo
Senior Vice President
Chief Financial Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

By CONSTANTINE S. MACRICOSTAS January 24, 2002
Constantine S. Macricostas
Chief Executive Officer and
Chairman of the Board

By ROBERT J. BOLLO January 24, 2002
Robert J. Bollo
Senior Vice President
Chief Financial Officer

By SEAN T. SMITH January 24, 2002
Sean T. Smith
Vice President
Controller

By WALTER M. FIEDEROWICZ January 24, 2002
Walter M. Fiederowicz
Director

By JOSEPH A. FIORITA, JR. January 24, 2002
Joseph A. Fiorita, Jr.
Director

By MICHAEL J. YOMAZZO January 24, 2002
Michael J. Yomazzo
Director

EXHIBITS INDEX

Exhibit Number	Description
3.1	Certificate of Incorporation. (1)
3.2	By-Laws, as amended. (1)
3.3	Amendment to Certificate of Incorporation, dated March 16, 1990. (3)
3.4	Amendment to Certificate of Incorporation, dated March 16, 1995. (10)
3.5	Amendment to Certificate of Incorporation, dated November 13, 1997. (13)
4.1	Form of Stock Certificate. (1)
4.2	Form of Indenture between the Company and The Bank of Nova Scotia Trust Company of New York, as Trustee, relating to the 4-3/4% Convertible Subordinated Notes due December 15, 2006. *
4.3	Registration Rights Agreement, dated December 12, 2001 between the Company, Morgan Stanley & Co. Incorporated and Merrill Lynch, Pierce, Fenner and Smith. *
4.4	Form of Indenture between The Chase Manhattan Bank, as Trustee, and the Company relating to the 6% Convertible Subordinated Notes due June 1, 2004. (12)
10.1	Loan Agreement, dated August 10, 1984, among the Company, Fairfield Associates, and the Connecticut Development Authority. (1)
10.2	Indenture of Trust, dated August 10, 1984, between the Connecticut Development Authority and Citytrust. (1)
10.3	Security Agreement dated August 10, 1984, between the Company and the Connecticut Development Authority, with assignment to Citytrust, as Trustee. (1)
10.4	Lease Agreement, dated August 10, 1984, between the Company and Fairfield Associates. (1)
10.5	Guaranty Agreement, dated August 10, 1984, by the Company and Constantine Macricostas to Citytrust, as Trustee. (1)
10.6	Assumption Agreement between the Company, MC2 and the Connecticut Development Authority, dated October 15, 1992, and related Note, Mortgage and Collateral Assignment of Leases and amendments thereto. (6)
10.7	Assumption Agreement, Third Amendment to Loan Agreement and Amendment to Guaranty Photronics Labs Incorporated Project - 1984 Series, dated August 28, 1992, by and among Photronics California, Inc., Photronics Financial Services, Inc., Photronics Investment Services, Inc.,

Photronics Texas, Inc., the Company, Constantine Macricostas, the Connecticut Development Authority, The Chase Manhattan Bank of Connecticut, N.A. and Fairfield Associates. (6)

- 10.8 Amendment to Security Agreements, dated October 31, 1988, by and among the Company, Citytrust, Constantine S. Macricostas and Mayo Associates. (8)
- 10.9 Amendment to Loan Agreements between the Company and the Connecticut Development Authority, dated as of June 8, 1990. (3)
- 10.10 Second Amendment to Loan Agreement dated as of December 20, 1991 by and among the Company, the Connecticut Development Authority and The Chase Manhattan Bank of Connecticut, N.A. (4)
- 10.11 Lease dated as of November 1, 1989 between the Company, MC3, Inc. and Alpha-Omega Associates. (8)
- 10.12 The Company's 1992 Stock Option Plan. (5) +
- 10.13 The Company's 1992 Employee Stock Purchase Plan. (5)
- 10.14 The Company's 1994 Employee Stock Option Plan. (7) +
- 10.15 The Company's 1996 Stock Option Plan. (11) +
- 10.16 The Company's 1998 Stock Option Plan. (14) +
- 10.17 The Company's 2000 Stock Option Plan filed as Appendix A to the Company's Notice of Annual Meeting and Proxy Statement dated April 4, 2000 is incorporated herein by reference. +
- 10.18 Form of Agreement regarding Life Insurance between the Company and each of Messrs. Macricostas and Bollo. (9) +
- 10.19 Consulting Agreement between the Company and Michael J. Yomazzo, dated October 10, 1997. (13) +
- 10.20 Consulting Agreement between the Company and Constantine S. Macricostas, dated October 10, 1997. (13) +
- 10.21 Employment Agreement dated July 17, 2000 between the Company and Robert J. Bollo. +
- 10.22 Put/Call Option Agreement dated August 21, 2001, by and among Photronics, Inc., Photo (L) Limited, Mask (L) Limited, Lakeway (L) Limited, The HSBC Private Equity Fund 2 Limited, The HSBC Private Equity Fund, L.P., Taiwan Mask Corp. and Blue Water Ventures International Ltd. filed as Exhibit 10 to the Company's quarterly report on Form 10-Q for the quarter ended July 31, 2001 is incorporated herein by reference.
- 10.23 Severance Agreement dated December 5, 2001, between the Company and James L. Mac Donald. * +
- 21 List of Subsidiaries. *
- 23 Consent of Deloitte & Touche LLP. *

* Filed herewith.

+ Represents a management contract or compensatory plan or arrangement required to be filed as an exhibit to this form pursuant to item 14(c) of this report.

- (1) Filed as an exhibit to the Company's Registration Statement on Form S-1, File Number 33-11694, which was declared effective by the Commission on March 10, 1987, and incorporated herein by reference.
- (2) Filed as an exhibit to the Company's Registration Statement on Form S-8, File Number 33-17530, which was declared effective on October 19, 1987, and incorporated herein by reference.
- (3) Filed as an exhibit to the Company's Registration Statement on Form S-2, File Number 33-34772 which was declared effective by the Commission on June 22, 1990, and incorporated herein by reference.
- (4) Filed as an exhibit to the Company's Annual Report on Form 10-K for the fiscal year ended October 31, 1991 and incorporated herein by reference.
- (5) Filed as an exhibit to the Company's Registration Statement on Form S-8, File Number 33-47446, which was filed on April 24, 1992, and incorporated herein by reference.
- (6) Filed as an exhibit to the Company's Annual Report on Form 10-K for the fiscal year ended October 31, 1992, and incorporated herein by reference.
- (7) Filed as an exhibit to the Company's Registration Statement on Form S-8, File Number 33-78102, which was filed on April 22, 1994, and incorporated herein by reference.
- (8) Filed as an exhibit to the Company's Annual Report on Form 10-K for the fiscal year ended October 31, 1993, and incorporated herein by reference.
- (9) Filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended July 31, 1995, and incorporated herein by reference.
- (10) Filed as an exhibit to the Company's Current Report on Form 8-K, dated March 24, 1995, and incorporated herein by reference.
- (11) Filed as an exhibit to the Company's Registration Statement on Form S-8, File Number 333-02245, which was filed on April 4, 1996, and incorporated herein by reference.
- (12) Filed as an exhibit to the Company's Registration Statement on Form S-3, File Number 333-26009, which was declared effective by the Commission on May 22, 1997, and incorporated herein by reference.
- (13) Filed as an exhibit to the Company's Annual Report on Form 10-K for the fiscal year ended November 2, 1997, and incorporated herein by reference.
- (14) Filed as an exhibit to the Company's Registration Statement on Form S-8, File Number 333-50809, which was filed on April 23, 1998, and incorporated herein by reference.

PHOTRONICS, INC.

To

THE BANK OF NOVA SCOTIA TRUST COMPANY OF NEW YORK,
as Trustee

INDENTURE

Dated as of

December 12, 2001

4-3/4% CONVERTIBLE SUBORDINATED NOTES DUE 2006

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INDENTURE

INDENTURE dated as of December 12, 2001 between Photronics, Inc., a Connecticut corporation (hereinafter called the "COMPANY"), having its principal office at 1061 East Indiantown Road, Jupiter, Florida 33477, and The Bank of Nova Scotia Trust Company of New York, a New York banking corporation, as trustee hereunder (hereinafter called the "TRUSTEE"), having a corporate trust office at One Liberty Plaza, New York, New York 10006.

WITNESSETH:

WHEREAS, for its lawful corporate purposes, the Company has duly authorized the issue of its 4-3/4% Convertible Subordinated Notes due 2006 (hereinafter called the "NOTES"), in an aggregate principal amount not to exceed \$200,000,000 and, to provide the terms and conditions upon which the Notes are to be authenticated, issued and delivered, the Company has duly authorized the execution and delivery of this Indenture; and

WHEREAS, the Notes, the certificate of authentication to be borne by the Notes, a form of assignment, a form of option to elect repayment upon a Fundamental Change, and a form of conversion notice to be borne by the Notes are to be substantially in the forms hereinafter provided for; and

WHEREAS, all acts and things necessary to make the Notes, when executed by the Company and authenticated and delivered by the Trustee or a duly authorized authenticating agent, as in this Indenture provided, the valid, binding and legal obligations of the Company, and to constitute this Indenture a valid agreement according to its terms, have been done and performed, and the execution of this Indenture and the issue hereunder of the Notes have in all respects been duly authorized,

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

That in order to declare the terms and conditions upon which the Notes are, and are to be, authenticated, issued and delivered, and in consideration of the premises and of the purchase and acceptance of the Notes by the holders thereof, the Company covenants and agrees with the Trustee for the equal and proportionate benefit of the respective holders from time to time of the Notes (except as otherwise provided below), as follows:

ARTICLE 1

DEFINITIONS

SECTION 1.1. Definitions. The terms defined in this Section 1.01 (except as herein otherwise expressly provided or unless the context otherwise requires) for all purposes of this Indenture and of any indenture supplemental hereto shall have the respective meanings specified in this Section 1.01 All other terms used in this Indenture that are defined in the Trust Indenture Act or which are by reference therein defined in the Securities Act (except as herein otherwise expressly provided or unless the context otherwise requires) shall have the meanings assigned to such terms in said Trust Indenture Act and in said Securities Act as in force at the date of the execution of this Indenture. The words "herein", "hereof", "hereunder", and words of similar import refer to this Indenture as a whole and not to any particular Article, Section or other Subdivision. The terms defined in this Article include the plural as well as the singular.

"ACCEPTED PURCHASED SHARES" has the meaning specified in Section 15.05(g).

"ADDITIONAL PAYMENT" has the meaning specified in Section 3.01(b).

"AFFILIATE" of any specified Person means any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified Person. For the purposes of this definition, "CONTROL", when used with respect to any specified Person means the power to direct or cause the direction of the management and policies of such Person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise, and the terms "CONTROLLING" and "CONTROLLED" have meanings correlative to the foregoing.

"BOARD OF DIRECTORS" means the Board of Directors of the Company or a committee of such Board duly authorized to act for it hereunder.

"BUSINESS DAY" means each Monday, Tuesday, Wednesday, Thursday and Friday which is not a day on which the banking institutions in The City of New York or the city in which the Corporate Trust Office is located are authorized or obligated by law or executive order to close or be closed.

"CLOSING PRICE" has the meaning specified in Section 15.05(h)(1).

"COMMISSION" means the Securities and Exchange Commission, as from time to time constituted, created under the Exchange Act, or, if at any time after the execution of this Indenture such Commission is not existing and performing

the duties now assigned to it under the Trust Indenture Act, then the body performing such duties at such time.

"COMMON STOCK" means any stock of any class of the Company which has no preference in respect of dividends or of amounts payable in the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company and which is not subject to redemption by the Company. Subject to the provisions of Section 15.06, however, shares issuable on conversion of Notes shall include only shares of the class designated as common stock of the Company at the date of this Indenture (namely, the Common Stock, \$.01 par value) or shares of any class or classes resulting from any reclassification or reclassifications thereof and which have no preference in respect of dividends or of amounts payable in the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company and which are not subject to redemption by the Company; provided that if at any time there shall be more than one such resulting class, the shares of each such class then so issuable on conversion shall be substantially in the proportion which the total number of shares of such class resulting from all such reclassifications bears to the total number of shares of all such classes resulting from all such reclassifications.

"COMPANY" means the corporation named as the "Company" in the first paragraph of this Indenture, and, subject to the provisions of Article 12, shall include its successors and assigns.

"COMPANY NOTICE" has the meaning specified in Section 3.05(b).

"CONVERSION PRICE" as of any day will equal \$1,000 divided by the Conversion Rate as of such date.

"CONVERSION RATE" has the meaning specified in Section 15.04.

"CORPORATE TRUST OFFICE" or other similar term, means the designated office of the Trustee at which at any particular time its corporate trust business as it relates to this Indenture shall be administered, which office is, at the date as of which this Indenture is dated, located at One Liberty Plaza, New York, New York 10006.

"CURRENT MARKET PRICE" has the meaning specified in Section 15.05(h)

"CUSTODIAN" means The Bank of Nova Scotia Trust Company of New York, as custodian with respect to the Notes in global form, or any successor entity thereto.

"DEFAULT" means any event that is, or after notice or passage of time, or both, would be, an Event of Default.

"DEFAULTED INTEREST" has the meaning specified in Section 2.03.

"DEPOSITARY" means, with respect to the Notes issuable or issued in whole or in part in global form, the Person specified in Section 2.05(d) as the Depositary with respect to such Notes, until a successor shall have been appointed and become such pursuant to the applicable provisions of this Indenture, and thereafter, "Depositary" shall mean or include such successor.

"EVENT OF DEFAULT" means any event specified in Section 7.01(a), (b), (c), (d) or (e).

"EXCHANGE ACT" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder, as in effect from time to time.

"EXPIRATION TIME" has the meaning specified in Section 15.05(f).

"FAIR MARKET VALUE" has the meaning specified in Section 15.05(h).

"FUNDAMENTAL CHANGE" means the occurrence of any transaction or event in connection with which all or substantially all of the Common Stock shall be exchanged for, converted into, acquired for or constitute solely the right to receive, consideration (whether by means of an exchange offer, liquidation, tender offer, consolidation, merger, combination, reclassification, recapitalization or otherwise) which is not all or substantially all common stock that is (or, upon consummation of or immediately following such transaction or event, which will be) listed on a United States national securities exchange or approved (or, upon consummation of or immediately following such transaction or event, which will be approved) for quotation on the Nasdaq National Market or any similar United States system of automated dissemination of quotations of securities prices.

"GLOBAL NOTE" has the meaning set forth in Section 2.05(b).

"INDENTURE" means this instrument as originally executed or, if amended or supplemented as herein provided, as so amended or supplemented.

"INITIAL PURCHASERS" means Morgan Stanley & Co. Incorporated and Merrill Lynch, Pierce, Fenner & Smith Incorporated.

"INTEREST" means, when used with reference to the Notes, any interest payable under the terms of the Notes and Liquidated Damages, if any, payable under the terms of the Registration Rights Agreement.

"LIQUIDATED DAMAGES" has the meaning specified for "Liquidated Damages Amount" in Section 2(e) of the Registration Rights Agreement.

"NOTE" or "NOTES" means any Note or Notes, as the case may be, authenticated and delivered under this Indenture, including the Global Note.

"NOTE REGISTER" has the meaning specified in Section 2.05(a).

"NOTE REGISTRAR" has the meaning specified in Section 2.05(a).

"NOTEHOLDER" or "HOLDER" as applied to any Note, or other similar terms (but excluding the term "beneficial holder"), means any Person in whose name at the time a particular Note is registered on the Note registrar's books.

"NOTICE DATE" means the date of mailing of the notice of redemption pursuant to Section 3.02.

"OFFER EXPIRATION TIME" has the meaning specified in Section 15.05(g).

"OFFICERS' CERTIFICATE", when used with respect to the Company, means a certificate signed by both (a) the Chairman of the Board, the Chief Executive Officer, the President or any Vice President (whether or not designated by a number or numbers or word or words added before or after the title "Vice President") and (b) the Treasurer or any Assistant Treasurer, the Controller or any Assistant Controller, or the Secretary or any Assistant Secretary of the Company.

"OPINION OF COUNSEL" means an opinion in writing signed by legal counsel, who may be an employee of or counsel to the Company, or other counsel reasonably acceptable to the Trustee.

"OPTIONAL REDEMPTION" has the meaning specified in Section 3.01(c).

"OUTSTANDING", when used with reference to Notes and subject to the provisions of Section 9.04, means, as of any particular time, all Notes authenticated and delivered by the Trustee under this Indenture, except:

(a) Notes theretofore canceled by the Trustee or delivered to the Trustee for cancellation;

(b) Notes, or portions thereof, (i) for the redemption of which monies in the necessary amount shall have been deposited in trust with the Trustee or with any paying agent (other than the Company) or (ii) which shall have been otherwise defeased in accordance with Article 13;

(c) Notes in lieu of which, or in substitution for which, other Notes shall have been authenticated and delivered pursuant to the terms of Section 2.06; and

(d) Notes converted into Common Stock pursuant to Article 15 and Notes deemed not outstanding pursuant to Article 3.

"PERSON" means a corporation, an association, a partnership, a limited liability company, an individual, a joint venture, a joint stock company, a trust, an unincorporated organization or a government or an agency or a political subdivision thereof.

"PORTAL MARKET" means The Portal Market operated by the National Association of Securities Dealers, Inc. or any successor thereto.

"PREDECESSOR NOTE" of any particular Note means every previous Note evidencing all or a portion of the same debt as that evidenced by such particular Note, and, for the purposes of this definition, any Note authenticated and delivered under Section 2.06 in lieu of a lost, destroyed or stolen Note shall be deemed to evidence the same debt as the lost, destroyed or stolen Note that it replaces.

"PREMIUM" means any premium payable under the terms of the Notes, including Additional Payments, if any, as defined in Section 3.01(b).

"QIB" means a "qualified institutional buyer" as defined in Rule 144A.

"RECORD DATE" has the meaning specified in Section 15.05(h).

"REGISTRATION RIGHTS AGREEMENT" means the Registration Rights Agreement, dated as of December 12, 2001, among the Company and the Initial Purchasers, as amended from time to time in accordance with its terms.

"REPURCHASE DATE" has the meaning specified in Section 3.05.

"RESPONSIBLE OFFICER", when used with respect to the Trustee, means an officer of the Trustee in the Corporate Trust Office assigned and duly authorized by the Trustee to administer this Indenture.

"RESTRICTED SECURITIES" has the meaning specified in Section 2.05(d).

"RULE 144A" means Rule 144A as promulgated under the Securities Act.

"SECURITIES ACT" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder, as in effect from time to time.

"SENIOR INDEBTEDNESS" means the principal of (and premium, if any) and interest, interest (including all interest accruing subsequent to the commencement of any bankruptcy or similar proceeding, whether or not a claim for post-petition interest is allowable as a claim in any such proceeding) on, and all fees and other amounts payable in connection with, the following, whether absolute or contingent, secured or unsecured, due or to become due, outstanding on the date of this Indenture or thereafter created, incurred or assumed: (a) indebtedness of the Company to banks, insurance companies and other financial institutions evidenced by credit or loan agreements, notes or other written obligations, (b) all other indebtedness of the Company (including indebtedness of others guaranteed by the Company) other than the Notes, which is (i) for money borrowed or (ii) evidenced by a note, security, debenture, bond or similar instrument, (c) obligations of the Company as lessee under leases required to be capitalized on the balance sheet of the lessee under generally accepted accounting principles, (d) obligations of the Company under interest rate and currency swaps, caps, floors, collars or similar agreements or arrangements intended to protect the Company against fluctuations in interest or currency exchange rates, (e) all obligations of the Company issued or assumed as the deferred purchase price of property, (f) all obligations of the Company for the reimbursement of letters of credit to the extent such obligations are Senior Indebtedness under clauses (a) through (c) above, and (g) renewals, extensions, amendments, modifications, restatements and refundings of, or any indebtedness or obligation issued in exchange for, any such indebtedness or obligation described in clauses (a) through (f) of this paragraph; provided that Senior Indebtedness shall not include (A) any such indebtedness or obligation if the terms of such indebtedness or obligation (or the terms of the instrument under which, or pursuant to which, it is issued) expressly provide that such indebtedness or obligation is not superior in right of payment to the Notes, or expressly provide that such indebtedness or obligation is pari passu with or junior to the Notes or (B) the Company's 6.00% Convertible Subordinated Notes due June 1, 2004.

"SIGNIFICANT SUBSIDIARY" means, as of any date of determination, a Subsidiary of the Company that would constitute a "significant subsidiary" as such term is defined under Rule 1-02 of Regulation S-X of the Commission as in effect on the date of this Indenture.

"SUBSIDIARY" means, with respect to any Person, (i) any corporation, association or other business entity of which more than 50% of the total voting

power of shares of capital stock or other equity interest entitled (without regard to the occurrence of any contingency) to vote in the election of directors, managers or trustees thereof is at the time owned or controlled, directly or indirectly, by such Person or one or more of the other subsidiaries of that Person (or a combination thereof) and (ii) any partnership (a) the sole general partner or managing general partner of which is such Person or a subsidiary of such Person or (b) the only general partners of which are such Person or of one or more subsidiaries of such Person (or any combination thereof).

"TRADING DAY" has the meaning specified in Section 15.05(h)(5).

"TRIGGER EVENT" has the meaning specified in Section 15.05(d).

"TRUST INDENTURE ACT" means the Trust Indenture Act of 1939, as amended, as it was in force at the date of this Indenture, except as provided in Sections 11.03 and 15.06; provided that, in the event the Trust Indenture Act of 1939 is amended after the date hereof, the term "Trust Indenture Act" shall mean, to the extent required by such amendment, the Trust Indenture Act of 1939 as so amended.

"TRUSTEE" means The Bank of Nova Scotia Trust Company of New York and its successors and any corporation resulting from or surviving any consolidation or merger to which it or its successors may be a party and any successor trustee at the time serving as successor trustee hereunder.

The definitions of certain other terms are as specified in Sections 2.05 and 3.05 and Article 15.

ARTICLE 2

ISSUE, DESCRIPTION, EXECUTION, REGISTRATION AND EXCHANGE OF NOTES

SECTION 2.1. Designation, Amount and Issue of Notes. The Notes shall be designated as "4-3/4% Convertible Subordinated Notes due 2006". Notes not to exceed the aggregate principal amount of \$200,000,000 (except pursuant to Sections 2.05, 2.06, 3.03, 3.05 and 15.02 hereof) upon the execution of this Indenture, or from time to time thereafter, may be executed by the Company and delivered to the Trustee for authentication, and the Trustee shall thereupon authenticate and deliver said Notes to or upon the written order of the Company, signed by (a) its Chairman of the Board, Chief Executive Officer, President or any Vice President (whether or not designated by a number or numbers or word or

words added before or after the title "Vice President") and (b) its Treasurer or any Assistant Treasurer, its Controller or any Assistant Controller or its Secretary or any Assistant Secretary, without any further action by the Company hereunder.

SECTION 2.2. Form of Notes. The Notes and the Trustee's certificate of authentication to be borne by such Notes shall be substantially in the form set forth in Exhibit A, which is incorporated in and made a part of this Indenture.

Any of the Notes may have such letters, numbers or other marks of identification and such notations, legends and endorsements as the officers executing the same may approve (execution thereof to be conclusive evidence of such approval) and as are not inconsistent with the provisions of this Indenture, or as may be required to comply with any law or with any rule or regulation made pursuant thereto or with any rule or regulation of any securities exchange or automated quotation system on which the Notes may be listed, or to conform to usage.

Any Global Note shall represent such of the outstanding Notes as shall be specified therein and shall provide that it shall represent the aggregate amount of outstanding Notes from time to time endorsed thereon and that the aggregate amount of outstanding Notes represented thereby may from time to time be increased or reduced to reflect transfers or exchanges permitted hereby. Any endorsement of a Global Note to reflect the amount of any increase or decrease in the amount of outstanding Notes represented thereby shall be made by the Trustee or the Custodian, at the direction of the Trustee, in such manner and upon instructions given by the holder of such Notes in accordance with this Indenture. Payment of principal of and interest and premium, if any, on any Global Note shall be made to the holder of such Note.

The terms and provisions contained in the form of Note attached as Exhibit A hereto shall constitute, and are hereby expressly made, a part of this Indenture and, to the extent applicable, the Company and the Trustee, by their execution and delivery of this Indenture, expressly agree to such terms and provisions and to be bound thereby.

SECTION 2.3. Date and Denomination of Notes, Payments of Interest . The Notes shall be issuable in registered form without coupons in denominations of \$1,000 principal amount and integral multiples thereof. Every Note shall be dated the date of its authentication and shall bear interest from the applicable date in each case as specified on the face of the form of Note attached as Exhibit A hereto. Interest on the Notes shall be computed on the basis of a 360-day year comprised of twelve (12) 30-day months.

The Person in whose name any Note (or its Predecessor Note) is registered on the Note register at the close of business on any record date with respect to any interest payment date shall be entitled to receive the interest payable on such interest payment date, except that the interest payable upon redemption will be payable to the Person to whom principal is payable pursuant to such redemption (unless the date of redemption is an interest payment date, in which case the semi-annual payment of interest becoming due on such date shall be payable to the holders of such Notes registered as such on the relevant record date). Notwithstanding the foregoing, if any Note (or portion thereof) is converted into Common Stock during the period from (but excluding a record date to (but excluding) the next succeeding interest payment date and such Note (or portion thereof) has been called for redemption on a redemption date or Repurchase Date which occurs during such period, the Company shall not be required to pay interest on such interest payment date in respect of any such Note (or portion thereof). Interest shall be payable at the office of the Company maintained by the Company for such purposes in the Borough of Manhattan, City of New York, which shall initially be an office or agency of the Trustee and may, as the Company shall specify to the paying agent in writing by each record date, be paid either (i) by check mailed to the address of the Person entitled thereto as it appears in the Note register (provided that any holder of Notes with an aggregate principal amount in excess of \$2,000,000 shall, at the written election of such holder, be paid by wire transfer in immediately available funds) or (ii) by transfer to an account maintained by such Person located in the United States; provided that payments to the Depository will be made by wire transfer of immediately available funds to the account of the Depository or its nominee. The term "RECORD DATE" with respect to any interest payment date shall mean the June 1 or December 1 preceding the relevant June 15 or December 15, respectively.

Any interest on any Note which is payable, but is not punctually paid or duly provided for, on any June 15 or December 15 (herein called "DEFAULTED INTEREST") shall forthwith cease to be payable to the Noteholder on the relevant record date by virtue of his having been such Noteholder, and such Defaulted Interest shall be paid by the Company, at its election in each case, as provided in clause (1) or (2) below:

(1) The Company may elect to make payment of any Defaulted Interest to the Persons in whose names the Notes (or their respective Predecessor Notes) are registered at the close of business on a special record date for the payment of such Defaulted Interest, which shall be fixed in the following manner. The Company shall notify the Trustee in writing of the amount of Defaulted Interest to be paid on each Note and the date of the payment (which shall be not less than twenty-five (25) days after the receipt by the Trustee of such notice, unless the Trustee shall consent to an earlier date), and at the same time the Company shall

deposit with the Trustee an amount of money equal to the aggregate amount to be paid in respect of such Defaulted Interest or shall make arrangements satisfactory to the Trustee for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the Person entitled to such Defaulted Interest as in this clause provided. Thereupon the Trustee shall fix a special record date for the payment of such Defaulted Interest which shall be not more than fifteen (15) days and not less than ten (10) days prior to the date of the proposed payment, and not less than ten (10) days after the receipt by the Trustee of the notice of the proposed payment, the Trustee shall promptly notify the Company of such special record date and, in the name and at the expense of the Company, shall cause notice of the proposed payment of such Defaulted Interest and the special record date therefor to be mailed, first-class postage prepaid, to each Noteholder at his address as it appears in the Note register, not less than ten (10) days prior to such special record date. Notice of the proposed payment of such Defaulted Interest and the special record date therefor having been so mailed, such Defaulted Interest shall be paid to the Persons in whose names the Notes (or their respective Predecessor Notes) were registered at the close of business on such special record date and shall no longer be payable pursuant to the following clause (2) of this Section 2.03.

(2) The Company may make payment of any Defaulted Interest in any other lawful manner not inconsistent with the requirements of any securities exchange or automated quotation system on which the Notes may be listed or designated for issuance, and upon such notice as may be required by such exchange or automated quotation system, if, after notice given by the Company to the Trustee of the proposed payment pursuant to this clause, such manner of payment shall be deemed practicable by the Trustee.

SECTION 2.4. Execution of Notes. The Notes shall be signed in the name and on behalf of the Company by the manual or facsimile signature of its Chairman of the Board, Chief Executive Officer, President or any Vice President (whether or not designated by a number or numbers or word or words added before or after the title "Vice President") and attested by the manual or facsimile signature of its Secretary or any of its Assistant Secretaries or its Treasurer or any of its Assistant Treasurers (which may be printed, engraved or otherwise reproduced thereon, by facsimile or otherwise). Only such Notes as shall bear thereon a certificate of authentication substantially in the form set forth on the form of Note attached as Exhibit A hereto, manually executed by the Trustee (or an authenticating agent appointed by the Trustee as provided by Section 16.10), shall be entitled to the benefits of this Indenture or be valid or obligatory for any purpose. Such certificate by the Trustee (or such an authenticating agent) upon any Note executed by the Company shall be conclusive evidence that the Note so

authenticated has been duly authenticated and delivered hereunder and that the holder is entitled to the benefits of this Indenture.

In case any officer of the Company who shall have signed any of the Notes shall cease to be such officer before the Notes so signed shall have been authenticated and delivered by the Trustee, or disposed of by the Company, such Notes nevertheless may be authenticated and delivered or disposed of as though the person who signed such Notes had not ceased to be such officer of the Company, and any Note may be signed on behalf of the Company by such persons as, at the actual date of the execution of such Note, shall be the proper officers of the Company, although at the date of the execution of this Indenture any such person was not such an officer.

SECTION 2.5. Exchange and Registration of Transfer of Notes; Restrictions on Transfer, Depositary. (a) The Company shall cause to be kept at the Corporate Trust Office a register (the register maintained in such office and in any other office or agency of the Company designated pursuant to Section 5.02 being herein sometimes collectively referred to as the "NOTE REGISTER") in which, subject to such reasonable regulations as it may prescribe, the Company shall provide for the registration of Notes and of transfers of Notes. The Note register shall be in written form or in any form capable of being converted into written form within a reasonably prompt period of time. The Trustee is hereby appointed "NOTE REGISTRAR" for the purpose of registering Notes and transfers of Notes as herein provided. The Company may appoint one or more co-registrars in accordance with Section 5.02.

Upon surrender for registration of transfer of any Note to the Note registrar or any co-registrar, and satisfaction of the requirements for such transfer set forth in this Section 2.05, the Company shall execute, and the Trustee shall authenticate and deliver, in the name of the designated transferee or transferees, one or more new Notes of any authorized denominations and of a like aggregate principal amount and bearing such restrictive legends as may be required by this Indenture.

Notes may be exchanged for other Notes of any authorized denominations and of a like aggregate principal amount, upon surrender of the Notes to be exchanged at any such office or agency maintained by the Company pursuant to Section 5.02. Whenever any Notes are so surrendered for exchange, the Company shall execute, and the Trustee shall authenticate and deliver, the Notes which the Noteholder making the exchange is entitled to receive bearing registration numbers not contemporaneously outstanding.

All Notes issued upon any registration of transfer or exchange of Notes shall be the valid obligations of the Company, evidencing the same debt, and

entitled to the same benefits under this Indenture, as the Notes surrendered upon such registration of transfer or exchange.

All Notes presented or surrendered for registration of transfer or for exchange, redemption or conversion shall (if so required by the Company or the Note registrar) be duly endorsed, or be accompanied by a written instrument or instruments of transfer in form satisfactory to the Company, and the Notes shall be duly executed by the Noteholder thereof or his attorney duly authorized in writing.

No service charge shall be made to any holder for any registration of transfer or exchange of Notes, but the Company may require payment by the holder of a sum sufficient to cover any tax, assessment or other governmental charge that may be imposed in connection with any registration of transfer or exchange of Notes.

Neither the Company nor the Trustee nor any Note registrar shall be required to exchange or register a transfer of (a) any Notes for a period of fifteen (15) days next preceding any selection of Notes to be redeemed, (b) any Notes or portions thereof called for redemption pursuant to Section 3.02, (c) any Notes or portions thereof surrendered for conversion pursuant to Article 15 or (d) any Notes or portions thereof tendered for redemption (and not withdrawn) pursuant to Section 3.05.

(b) So long as the Notes are eligible for book-entry settlement with the Depositary, or unless otherwise required by law, all of the Notes will be represented by one or more Notes in global form registered in the name of the Depositary or the nominee of the Depositary (the "GLOBAL NOTE"), except as otherwise specified below. The transfer and exchange of beneficial interests in any such Global Note shall be effected through the Depositary in accordance with this Indenture and the procedures of the Depositary therefor. The Trustee shall make appropriate endorsements to reflect increases or decreases in the principal amounts of any such Global Note as set forth on the face of the Note ("PRINCIPAL AMOUNT") to reflect any such transfers. Except as provided below, beneficial owners of a Global Note shall not be entitled to have certificates registered in their names, will not receive or be entitled to receive physical delivery of certificates in definitive form and will not be considered holders of such Global Note.

(c) Any Global Note may be endorsed with or have incorporated in the text thereof such legends or recitals or changes not inconsistent with the provisions of this Indenture as may be required by the Custodian, the Depositary or by the National Association of Securities Dealers, Inc. in order for the Notes to be tradeable on The Portal Market or as may be required for the Notes to be

tradeable on any other market developed for trading of securities pursuant to Rule 144A or required to comply with any applicable law or any regulation thereunder or with the rules and regulations of any securities exchange or automated quotation system upon which the Notes may be listed or traded or to conform with any usage with respect thereto, or to indicate any special limitations or restrictions to which any particular Notes are subject.

(d Every Note that bears or is required under this Section 2.05(d) to bear the legend set forth in this Section (together with any Common Stock issued upon conversion of the Notes and required to bear the legend set forth in Section 2.05(e), collectively, the "RESTRICTED SECURITIES") shall be subject to the restrictions on transfer set forth in this Section 2.05(d) (including those set forth in the legend set forth below) unless such restrictions on transfer shall be waived by written consent of the Company, and the holder of each such Restricted Security, by such Noteholder's acceptance thereof, agrees to be bound by all such restrictions on transfer. As used in Sections 2.05(d) and 2.05(e), the term "TRANSFER" encompasses any sale, pledge, loan, transfer or other disposition whatsoever of any Restricted Security.

Until the expiration of the holding period applicable to sales thereof under Rule 144(k) under the Securities Act (or any successor provision), any certificate evidencing such Note (and all securities issued in exchange therefor or substitution thereof, other than Common Stock, if any, issued upon conversion thereof, which shall bear the legend set forth in Section 2.05(e), if applicable) shall bear a legend in substantially the following form, unless such Note has been sold pursuant to a registration statement that has been declared effective under the Securities Act (and which continues to be effective at the time of such transfer), or unless otherwise agreed by the Company in writing, with written notice thereof to the Trustee:

THIS NOTE HAS NOT BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY STATE SECURITIES LAWS, AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. BY ITS ACQUISITION HEREOF, THE HOLDER (1) REPRESENTS THAT IT IS A "QUALIFIED INSTITUTIONAL BUYER" (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT); (2) AGREES THAT IT WILL NOT, PRIOR TO EXPIRATION OF THE HOLDING PERIOD APPLICABLE TO SALES OF THIS NOTE UNDER RULE 144(K) UNDER THE SECURITIES ACT (OR ANY SUCCESSOR PROVISION), RESELL OR OTHERWISE

TRANSFER THIS NOTE OR THE COMMON STOCK ISSUABLE UPON CONVERSION OF THIS NOTE EXCEPT (A) TO PHOTRONICS, INC. OR ANY SUBSIDIARY THEREOF, (B) TO A QUALIFIED INSTITUTIONAL BUYER IN COMPLIANCE WITH RULE 144A UNDER THE SECURITIES ACT, (C) PURSUANT TO THE EXEMPTION FROM REGISTRATION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE) OR (D) PURSUANT TO A REGISTRATION STATEMENT WHICH HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT (AND WHICH CONTINUES TO BE EFFECTIVE AT THE TIME OF SUCH TRANSFER); (3) PRIOR TO SUCH TRANSFER (OTHER THAN A TRANSFER PURSUANT TO CLAUSE (2)(D) ABOVE), IT WILL FURNISH TO THE BANK OF NOVA SCOTIA TRUST COMPANY OF NEW YORK, AS TRUSTEE (OR A SUCCESSOR TRUSTEE, AS APPLICABLE), SUCH CERTIFICATIONS, LEGAL OPINIONS OR OTHER INFORMATION AS THE TRUSTEE MAY REASONABLY REQUIRE TO CONFIRM THAT SUCH TRANSFER IS BEING MADE PURSUANT TO AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT; AND (4) AGREES THAT IT WILL DELIVER TO EACH PERSON TO WHOM THIS NOTE IS TRANSFERRED A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND. THIS LEGEND WILL BE REMOVED UPON THE EARLIER OF THE TRANSFER OF THIS NOTE PURSUANT TO CLAUSE (2)(D) ABOVE OR UPON ANY TRANSFER OF THIS NOTE UNDER RULE 144(K) UNDER THE SECURITIES ACT (OR ANY SUCCESSOR PROVISION). THE INDENTURE CONTAINS A PROVISION REQUIRING THE TRUSTEE TO REFUSE TO REGISTER ANY TRANSFER OF THIS NOTE IN VIOLATION OF THE FOREGOING RESTRICTION.

Any Note (or security issued in exchange or substitution therefor) as to which such restrictions on transfer shall have expired in accordance with their terms or as to conditions for removal of the foregoing legend set forth therein have been satisfied may, upon surrender of such Note for exchange to the Note registrar in accordance with the provisions of this Section 2.05, be exchanged for a new Note or Notes, of like tenor and aggregate principal amount, which shall not bear the restrictive legend required by this Section 2.05(d).

Notwithstanding any other provisions of this Indenture (other than the provisions set forth in this Section 2.05(d)), a Global Note may not be transferred as a whole or in part except by the Depositary to a nominee of the Depositary or by a nominee of the Depositary to the Depositary or another nominee of the Depositary or by the Depositary or any such nominee to a successor Depositary or a nominee of such successor Depositary.

The Depositary shall be a clearing agency registered under the Exchange Act. The Company initially appoints The Depositary Trust Company to act as Depositary with respect to the Notes in global form. Initially, the Global Note shall be issued to the Depositary, registered in the name of Cede & Co., as the nominee of the Depositary, and deposited with the Custodian for Cede & Co.

If at any time the Depositary for a Global Note notifies the Company that it is unwilling or unable to continue as Depositary for such Note, the Company may appoint a successor Depositary with respect to such Note. If a successor Depositary is not appointed by the Company within ninety (90) days after the Company receives such notice, the Company will execute, and the Trustee, upon receipt of an Officers' Certificate for the authentication and delivery of Notes, will authenticate and deliver, Notes in certificated form, in aggregate principal amount equal to the principal amount of such Global Note, in exchange for such Global Note.

Notes in certificated form issued in exchange for a Global Note pursuant to this Section 2.05 shall be registered in such names and in such authorized denominations as the Depositary, pursuant to instructions from its direct or indirect participants or otherwise, shall instruct the Trustee. Upon execution and authentication, the Trustee shall deliver such Notes in certificated form to the Persons in whose names such Notes in certificated form are so registered.

At such time as all interests in a Global Note have been redeemed, converted, canceled or the Global Note is exchanged for Notes in certificated form, such Global Note shall, upon receipt thereof, be canceled by the Trustee in accordance with standing procedures and instructions existing between the Depositary and the Custodian. At any time prior to such cancellation, if any interest in a Global Note is redeemed, converted, repurchased or canceled, the principal amount of such Global Note shall, in accordance with the standing procedures and instructions existing between the Depositary and the Custodian, be appropriately reduced or increased, as the case may be, and an endorsement shall be made on such Global Note, by the Trustee or the Custodian, at the direction of the Trustee, to reflect such reduction or increase.

(e Until the expiration of the holding period applicable to sales thereof under Rule 144(k) under the Securities Act (or any successor provision), any stock

certificate representing Common Stock issued upon conversion of any Note shall bear a legend in substantially the following form, unless such Common Stock has been sold pursuant to a registration statement that has been declared effective under the Securities Act (and which continues to be effective at the time of such transfer) or such Common Stock has been issued upon conversion of Notes that have been transferred pursuant to a registration statement that has been declared effective under the Securities Act, or unless otherwise agreed by the Company in writing with written notice thereof to the transfer agent:

THE COMMON STOCK EVIDENCED HEREBY HAS NOT BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY STATE SECURITIES LAWS, AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. THE HOLDER HEREOF AGREES THAT, UNTIL THE EXPIRATION OF THE HOLDING PERIOD APPLICABLE TO SALES OF THE COMMON STOCK EVIDENCED HEREBY UNDER RULE 144(K) UNDER THE SECURITIES ACT (OR ANY SUCCESSOR PROVISION), (1) IT WILL NOT RESELL OR OTHERWISE TRANSFER THE COMMON STOCK EVIDENCED HEREBY EXCEPT (A) TO PHOTRONICS, INC. OR TO ANY SUBSIDIARY THEREOF, (B) TO A "QUALIFIED INSTITUTIONAL BUYER" (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT) IN COMPLIANCE WITH RULE 144A, (C) PURSUANT TO THE EXEMPTION FROM REGISTRATION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE), OR (D) PURSUANT TO A REGISTRATION STATEMENT WHICH HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT (AND WHICH CONTINUES TO BE EFFECTIVE AT THE TIME OF SUCH TRANSFER); (2) PRIOR TO SUCH TRANSFER (OTHER THAN A TRANSFER PURSUANT TO CLAUSE (1)(D) ABOVE), IT WILL FURNISH TO REGISTRAR & TRANSFER COMPANY, AS TRANSFER AGENT (OR A SUCCESSOR TRANSFER AGENT, AS APPLICABLE), SUCH CERTIFICATIONS, LEGAL OPINIONS OR OTHER INFORMATION AS SUCH TRANSFER AGENT MAY REASONABLY REQUIRE TO CONFIRM THAT SUCH TRANSFER IS BEING MADE PURSUANT TO AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND (3) IT WILL DELIVER TO EACH

PERSON TO WHOM THE COMMON STOCK EVIDENCED HEREBY IS TRANSFERRED (OTHER THAN A TRANSFER PURSUANT TO CLAUSE (1)(D) ABOVE) A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND. THIS LEGEND WILL BE REMOVED UPON THE EARLIER OF THE TRANSFER OF THE COMMON STOCK EVIDENCED HEREBY PURSUANT TO CLAUSE (1)(D) ABOVE OR UPON ANY TRANSFER OF THE COMMON STOCK EVIDENCED HEREBY AFTER THE EXPIRATION OF THE HOLDING PERIOD APPLICABLE TO SALES OF THE SECURITY EVIDENCED HEREBY UNDER RULE 144(K) UNDER THE SECURITIES ACT (OR ANY SUCCESSOR PROVISION).

Any such Common Stock as to which such restrictions on transfer shall have expired in accordance with their terms or as to which the conditions for removal of the foregoing legend set forth therein have been satisfied may, upon surrender of the certificates representing such shares of Common Stock for exchange in accordance with the procedures of the transfer agent for the Common Stock, be exchanged for a new certificate or certificates for a like number of shares of Common Stock, which shall not bear the restrictive legend required by this Section 2.05(e).

(f Any Note or Common Stock issued upon the conversion or exchange of a Note that, prior to the expiration of the holding period applicable to sales thereof under Rule 144(k) under the Securities Act (or any successor provision), is purchased or owned by the Company or any Affiliate thereof may not be resold by the Company or such Affiliate unless registered under the Securities Act or resold pursuant to an exemption from the registration requirements of the Securities Act in a transaction which results in such Notes or Common Stock, as the case may be, no longer being "restricted securities" (as defined under Rule 144).

SECTION 2.6. Mutilated, Destroyed, Lost or Stolen Notes. In case any Note shall become mutilated or be destroyed, lost or stolen, the Company in its discretion may execute, and upon its written request the Trustee or an authenticating agent appointed by the Trustee shall authenticate and make available for delivery, a new Note, bearing a number not contemporaneously outstanding, in exchange and substitution for the mutilated Note, or in lieu of and in substitution for the Note so destroyed, lost or stolen. In every case the applicant for a substituted Note shall furnish to the Company, to the Trustee and, if applicable, to such authenticating agent such security or indemnity as may be required by them to save each of them harmless for any loss, liability, cost or expense caused by or connected with such substitution, and, in every case of destruction, loss or theft, the applicant shall also furnish to the Company, to the

Trustee and, if applicable, to such authenticating agent evidence to their satisfaction of the destruction, loss or theft of such Note and of the ownership thereof.

Following receipt by the Trustee or such authenticating agent, as the case may be, of satisfactory security or indemnity and evidence, as described in the preceding paragraph, the Trustee or such authenticating agent may authenticate any such substituted Note and make available for delivery such Note. Upon the issuance of any substituted Note, the Company may require the payment by the holder of a sum sufficient to cover any tax, assessment or other governmental charge that may be imposed in relation thereto and any other expenses connected therewith. In case any Note which has matured or is about to mature or has been called for redemption or has been tendered for redemption (and not withdrawn) or is to be converted into Common Stock shall become mutilated or be destroyed, lost or stolen, the Company may, instead of issuing a substitute Note, pay or authorize the payment of or convert or authorize the conversion of the same (without surrender thereof except in the case of a mutilated Note), as the case may be, if the applicant for such payment or conversion shall furnish to the Company, to the Trustee and, if applicable, to such authenticating agent such security or indemnity as may be required by them to save each of them harmless for any loss, liability, cost or expense caused by or connected with such substitution, and, in every case of destruction, loss or theft, the applicant shall also furnish to the Company, the Trustee and, if applicable, any paying agent or conversion agent evidence to their satisfaction of the destruction, loss or theft of such Note and of the ownership thereof.

Every substitute Note issued pursuant to the provisions of this Section 2.06 by virtue of the fact that any Note is destroyed, lost or stolen shall constitute an additional contractual obligation of the Company, whether or not the destroyed, lost or stolen Note shall be found at any time, and shall be entitled to all the benefits of (but shall be subject to all the limitations set forth in) this Indenture equally and proportionately with any and all other Notes duly issued hereunder. To the extent permitted by law, all Notes shall be held and owned upon the express condition that the foregoing provisions are exclusive with respect to the replacement or payment or conversion of mutilated, destroyed, lost or stolen Notes and shall preclude any and all other rights or remedies notwithstanding any law or statute existing or hereafter enacted to the contrary with respect to the replacement or payment or conversion of negotiable instruments or other securities without their surrender.

SECTION 2.7. Temporary Notes. Pending the preparation of Notes in certificated form, the Company may execute and the Trustee or an authenticating agent appointed by the Trustee shall, upon the written request of the Company,

authenticate and deliver temporary Notes (printed or lithographed). Temporary Notes shall be issuable in any authorized denomination, and substantially in the form of the Notes in certificated form, but with such omissions, insertions and variations as may be appropriate for temporary Notes, all as may be determined by the Company. Every such temporary Note shall be executed by the Company and authenticated by the Trustee or such authenticating agent upon the same conditions and in substantially the same manner, and with the same effect, as the Notes in certificated form. Without unreasonable delay the Company will execute and deliver to the Trustee or such authenticating agent Notes in certificated form and thereupon any or all temporary Notes may be surrendered in exchange therefor, at each office or agency maintained by the Company pursuant to Section 5.02 and the Trustee or such authenticating agent shall authenticate and make available for delivery in exchange for such temporary Notes an equal aggregate principal amount of Notes in certificated form. Such exchange shall be made by the Company at its own expense and without any charge therefor. Until so exchanged, the temporary Notes shall in all respects be entitled to the same benefits and subject to the same limitations under this Indenture as Notes in certificated form authenticated and delivered hereunder.

SECTION 2.8. Cancellation of Notes Paid, Etc. All Notes surrendered for the purpose of payment, redemption, conversion, exchange or registration of transfer shall, if surrendered to the Company or any paying agent or any Note registrar or any conversion agent, be surrendered to the Trustee and promptly canceled by it, or, if surrendered to the Trustee, shall be promptly canceled by it, and no Notes shall be issued in lieu thereof except as expressly permitted by any of the provisions of this Indenture. The Trustee shall dispose of such canceled Notes in accordance with its customary procedures. If the Company shall acquire any of the Notes, such acquisition shall not operate as a redemption or satisfaction of the indebtedness represented by such Notes unless and until the same are delivered to the Trustee for cancellation.

SECTION 2.9. Cusip Numbers. The Company in issuing the Notes may use "CUSIP" numbers (if then generally in use), and, if so, the Trustee shall use "CUSIP" numbers in notices of redemption as a convenience to Noteholders; provided that any such notice may state that no representation is made as to the correctness of such numbers either as printed on the Notes or as contained in any notice of a redemption and that reliance may be placed only on the other identification numbers printed on the Notes, and any such redemption shall not be affected by any defect in or omission of such numbers. The Company will promptly notify the Trustee of any change in the "CUSIP" numbers.

ARTICLE 3

REDEMPTION OF NOTES

SECTION 3.1. Redemption of Notes. (a Initial Prohibition on Redemption. Except as otherwise provided in Section 3.01(b) and Section 3.05, the Notes may not be redeemed by the Company, in whole or in part, at any time prior to December 17, 2004.

(b Provisional Redemption by the Company. The Notes may be redeemed by the Company, in whole or in part, at any time prior to December 17, 2004 (a "PROVISIONAL REDEMPTION"), upon notice as set forth in Section 3.02, at a redemption price equal to 100% of the aggregate principal amount of Notes to be redeemed, together with accrued and unpaid interest, if any, to but excluding the date fixed for redemption (the "PROVISIONAL REDEMPTION DATE") if (i) the Closing Price of the Common Stock shall have exceeded 150% of the Conversion Price then in effect for at least 20 Trading Days in a consecutive 30-Trading Day period ending on the Trading Day immediately preceding the date that the notice of the Provisional Redemption is first mailed pursuant to Section 3.02 and (ii) if the redemption would occur before December 12, 2003, the Shelf Registration Statement (as defined in the Registration Rights Agreement) covering resales of the Notes, and the Common Stock issuable upon conversion of the Notes, is effective and available for use and is expected to remain effective and available for use until the 30th day immediately following the Provisional Redemption Date.

Upon any such Provisional Redemption, the Company shall make an additional payment (the "ADDITIONAL PAYMENT") with respect to the Notes called for redemption to holders as of the Notice Date in an amount equal to the total aggregate amount of interest otherwise payable on the Notes from the last day through which interest was paid or duly provided for on the Notes, or December 12, 2001 if no interest has been paid or duly provided for, through December 17, 2004. The Company shall make the Additional Payment on all Notes called for Provisional Redemption, including any Notes converted into Common Stock pursuant to the terms hereof after the Notice Date and prior to the Provisional Redemption Date.

(c Optional Redemption by the Company. At any time on or after December 17, 2004 and prior to maturity, the Notes may be redeemed at the option of the Company, in whole or in part, upon notice as set forth in Section 3.02, at the redemption prices set forth in the Form of Note attached as Exhibit A hereto, together with accrued and unpaid interest, if any, to, but excluding, the date fixed for redemption.

SECTION 3.2. Notice of Redemptions, Selection of Notes. In case the Company shall desire to exercise the right to redeem all or, as the case may be, any part of the Notes pursuant to Section 3.01, it shall fix a date for redemption and it or, at its written request received by the Trustee not fewer than forty-five (45) days prior (or such shorter period of time as may be acceptable to the Trustee) to the date fixed for redemption, the Trustee in the name of and at the expense of the Company, shall mail or cause to be mailed a notice of such redemption not fewer than thirty (30) nor more than sixty (60) days prior to the date fixed for redemption to the holders of Notes so to be redeemed as a whole or in part at their last addresses as the same appear on the Note register; provided that if the Company shall give such notice, it shall also give written notice, and written notice of the Notes to be redeemed, to the Trustee. Such mailing shall be by first class mail. The notice if mailed in the manner herein provided shall be conclusively presumed to have been duly given, whether or not the holder receives such notice. In any case, failure to give such notice by mail or any defect in the notice to the holder of any Note designated for redemption as a whole or in part shall not affect the validity of the proceedings for the redemption of any other Note. Concurrently with the mailing of any such notice of redemption, the Company shall issue a press release announcing such redemption, the form and content of which press release shall be determined by the Company in its sole discretion. The failure to issue any such press release or any defect therein shall not affect the validity of the redemption notice or any of the proceedings for the redemption of any Note called for redemption.

Each such notice of redemption shall specify the aggregate principal amount of Notes to be redeemed, the CUSIP number or numbers of the Notes being redeemed, the date fixed for redemption (which shall be a Business Day), the redemption price at which Notes are to be redeemed, the place or places of payment, that payment will be made upon presentation and surrender of such Notes, whether interest accrued to the date fixed for redemption or the Additional Payment will be paid as specified in said notice, and that on and after said date interest thereon or on the portion thereof to be redeemed will cease to accrue. Such notice shall also state the current Conversion Rate and the date on which the right to convert such Notes or portions thereof into Common Stock will expire. If fewer than all the Notes are to be redeemed, the notice of redemption shall identify the Notes to be redeemed (including CUSIP numbers, if any). In case any Note is to be redeemed in part only, the notice of redemption shall state the portion of the principal amount thereof to be redeemed and shall state that, on and after the date fixed for redemption, upon surrender of such Note, a new Note or Notes in principal amount equal to the unredeemed portion thereof will be issued.

On or prior to the redemption date specified in the notice of redemption given as provided in this Section 3.02, the Company will deposit with the Trustee

or with one or more paying agents (or, if the Company is acting as its own paying agent, set aside, segregate and hold in trust as provided in Section 5.04) an amount of money in immediately available funds sufficient to redeem on the redemption date all the Notes (or portions thereof) so called for redemption (other than those theretofore surrendered for conversion into Common Stock) at the appropriate redemption price and the Additional Payment, if any, together with accrued interest to, but excluding, the date fixed for redemption; provided that if such payment is made on the redemption date it must be received by the Trustee or paying agent, as the case may be, by 10:00 a.m. New York City time on such date. The Company shall be entitled to retain any interest, yield or gain on amounts deposited with the Trustee or any paying agent pursuant to this Section 3.02 in excess of amounts required hereunder to pay the redemption price, the Additional Payment, if any, and accrued interest to, but excluding, the date fixed for redemption. If any Note called for redemption is converted pursuant hereto prior to such redemption, any money deposited with the Trustee or any paying agent or so segregated and held in trust for the redemption of such Note shall be paid to the Company upon its written request, or, if then held by the Company, shall be discharged from such trust. Whenever any Notes are to be redeemed, the Company will give the Trustee written notice in the form of an Officers' Certificate not fewer than forty-five (45) days (or such shorter period of time as may be acceptable to the Trustee) prior to the redemption date as to the aggregate principal amount of Notes to be redeemed.

If less than all of the outstanding Notes are to be redeemed, the Trustee shall select the Notes or portions thereof of the Global Note or the Notes in certificated form to be redeemed (in principal amounts of \$1,000 or integral multiples thereof) by lot, on a pro rata basis or by another method the Trustee deems fair and appropriate. If any Note selected for partial redemption is submitted for conversion in part after such selection, the portion of such Note submitted for conversion shall be deemed (so far as may be) to be the portion to be selected for redemption. The Notes (or portions thereof) so selected shall be deemed duly selected for redemption for all purposes hereof, notwithstanding that any such Note is submitted for conversion in part before the mailing of the notice of redemption.

Upon any redemption of less than all of the outstanding Notes, the Company and the Trustee may (but need not), solely for purposes of determining the pro rata allocation among such Notes as are unconverted and outstanding at the time of redemption, treat as outstanding any Notes surrendered for conversion during the period of fifteen (15) days next preceding the mailing of a notice of redemption and may (but need not) treat as outstanding any Note authenticated and delivered during such period in exchange for the unconverted portion of any Note converted in part during such period.

SECTION 3.3. Payment of Notes Called for Redemption. If notice of redemption has been given as above provided, the Notes or portion of Notes with respect to which such notice has been given shall, unless converted into Common Stock pursuant to the terms hereof, become due and payable on the date fixed for redemption and at the place or places stated in such notice at the applicable redemption price and the Additional Payment, if any, together with interest accrued to (but excluding) the date fixed for redemption, and on and after said date (unless the Company shall default in the payment of such Notes at the redemption price and the Additional Payment, if any, together with interest accrued to said date) interest on the Notes or portion of Notes so called for redemption shall cease to accrue and, after the close of business on the Business Day next preceding the date fixed for redemption, such Notes shall cease to be convertible into Common Stock and, except as provided in Sections 8.05 and 13.04, to be entitled to any benefit or security under this Indenture, and the holders thereof shall have no right in respect of such Notes except the right to receive the redemption price thereof and the Additional Payment, if any, and, except in the case of a Provisional Redemption, unpaid interest to, but excluding, the date fixed for redemption. On presentation and surrender of such Notes at a place of payment in said notice specified, the said Notes or the specified portions thereof shall be paid and redeemed by the Company at the applicable redemption price and the Additional Payment, if any, together with interest accrued thereon to (but excluding) the date fixed for redemption; provided that if the applicable redemption date is an interest payment date, the interest payable on such interest payment date shall be payable to the holders of record of such Notes on the applicable record date instead of the holders surrendering such Notes for redemption on such date.

Upon presentation of any Note redeemed in part only, the Company shall execute and the Trustee shall authenticate and make available for delivery to the holder thereof, at the expense of the Company, a new Note or Notes, of authorized denominations, in principal amount equal to the unredeemed portion of the Notes so presented.

Notwithstanding the foregoing, the Trustee shall not redeem any Notes or mail any notice of redemption during the continuance of a default in payment of interest or premium, if any, on the Notes. If any Note called for redemption shall not be so paid upon surrender thereof for redemption, the principal and premium, if any, shall, until paid or duly provided for, bear interest from the date fixed for redemption at the rate borne by the Note and such Note shall remain convertible into Common Stock until the principal and premium, if any, and interest shall have been paid or duly provided for.

SECTION 3.4. Conversion Arrangement on Call for Redemption. In connection with any redemption of Notes, the Company may arrange for the purchase and conversion of any Notes by an agreement with one or more investment bankers or other purchasers to purchase such Notes by paying to the Trustee in trust for the Noteholders, on or before the date fixed for redemption, an amount not less than the applicable redemption price and the Additional Payment, if any, together with interest accrued to (but excluding) the date fixed for redemption, of such Notes. Notwithstanding anything to the contrary contained in this Article 3, the obligation of the Company to pay the redemption price of such Notes and the Additional Payment, if any, together with interest accrued to (but excluding) the date fixed for redemption, shall be deemed to be satisfied and discharged to the extent such amount is so paid by such purchasers. If such an agreement is entered into, a copy of which will be filed with the Trustee prior to the date fixed for redemption, any Notes not duly surrendered for conversion by the holders thereof may, at the option of the Company, be deemed, to the fullest extent permitted by law, acquired by such purchasers from such holders and (notwithstanding anything to the contrary contained in Article 15) surrendered by such purchasers for conversion, all as of immediately prior to the close of business on the date fixed for redemption (and the right to convert any such Notes shall be extended through such time), subject to payment of the above amount as aforesaid. At the direction of the Company, the Trustee shall hold and dispose of any such amount paid to it in the same manner as it would monies deposited with it by the Company for the redemption of Notes. Without the Trustee's prior written consent, no arrangement between the Company and such purchasers for the purchase and conversion of any Notes shall increase or otherwise affect any of the powers, duties, responsibilities or obligations of the Trustee as set forth in this Indenture.

SECTION 3.5. Redemption at Option of Holders. (a) If there shall occur a Fundamental Change at any time prior to maturity of the Notes, then each Noteholder shall have the right, at such holder's option, to require the Company to redeem all of such holder's Notes, or any portion thereof that is an integral multiple of \$1,000 principal amount, on the date (the "REPURCHASE DATE") that is thirty (30) days after the date of the Company Notice (as defined in Section 3.05(b) below) of such Fundamental Change (or, if such 30th day is not a Business Day, the next succeeding Business Day) at a redemption price equal to 100% of the principal amount thereof, together with accrued interest to, but excluding, the Repurchase Date; provided that, if such Repurchase Date is an interest payment date, then the interest payable on such interest payment date shall be paid to the holders of record of the Notes on the applicable record date instead of the holders surrendering the Notes for redemption on such date.

Upon presentation of any Note redeemed in part only, the Company shall execute and, upon the Company's written direction to the Trustee, the Trustee shall authenticate and deliver to the holder thereof, at the expense of the Company, a new Note or Notes, of authorized denominations, in principal amount equal to the unredeemed portion of the Notes so presented.

(b) On or before the tenth day after the occurrence of a Fundamental Change, the Company or at its written request (which must be received by the Trustee at least five (5) Business Days prior to the date the Trustee is requested to give notice as described below, unless the Trustee shall agree in writing to a shorter period), the Trustee, in the name of and at the expense of the Company, shall mail or cause to be mailed to all holders of record on the date of the Fundamental Change a notice (the "COMPANY NOTICE") of the occurrence of such Fundamental Change and of the redemption right at the option of the holders arising as a result thereof. Such notice shall be mailed in the manner and with the effect set forth in the first paragraph of Section 3.02 (without regard for the time limits set forth therein). If the Company shall give such notice, the Company shall also deliver a copy of the Company Notice to the Trustee at such time as it is mailed to Noteholders. Concurrently with the mailing of any Company Notice, the Company shall issue a press release announcing such Fundamental Change referred to in the Company Notice, the form and content of which press release shall be determined by the Company in its sole discretion. The failure to issue any such press release or any defect therein shall not affect the validity of the Company Notice or any proceedings for the redemption of any Note which any Noteholder may elect to have the Company redeem as provided in this Section 3.05.

Each Company Notice shall specify the circumstances constituting the Fundamental Change, the Repurchase Date, the price at which the Company shall be obligated to redeem Notes, that the holder must exercise the redemption right on or prior to the close of business on the Repurchase Date (the "FUNDAMENTAL CHANGE EXPIRATION TIME"), that the holder shall have the right to withdraw any Notes surrendered prior to the Fundamental Change Expiration Time, a description of the procedure which a Noteholder must follow to exercise such redemption right and to withdraw any surrendered Notes, the place or places where the holder is to surrender such holder's Notes, the amount of interest accrued on each Note to the Repurchase Date and the "CUSIP" number or numbers of the Notes (if then generally in use).

No failure of the Company to give the foregoing notices and no defect therein shall limit the Noteholders' redemption rights or affect the validity of the proceedings for the redemption of the Notes pursuant to this Section 3.05.

(c) For a Note to be so redeemed at the option of the holder, the Company must receive at the office or agency of the Company maintained for that purpose or, at the option of such holder, the Corporate Trust Office, such Note with the form entitled "Option to Elect Repayment Upon A Fundamental Change" on the reverse thereof duly completed, together with such Notes duly endorsed for transfer, on or before the Fundamental Change Expiration Time. All questions as to the validity, eligibility (including time of receipt) and acceptance of any Note for repayment shall be determined by the Company, whose determination shall be final and binding absent manifest error.

(d) On or prior to the Repurchase Date, the Company will deposit with the Trustee or with one or more paying agents (or, if the Company is acting as its own paying agent, set aside, segregate and hold in trust as provided in Section 5.04) an amount of money sufficient to redeem on the Repurchase Date all the Notes to be redeemed on such date at the appropriate redemption price, together with accrued interest to, but excluding, the Repurchase Date; provided that if such payment is made on the Repurchase Date it must be received by the Trustee or paying agent, as the case may be, by 10:00 a.m. New York City time, on such date. Payment for Notes surrendered for redemption (and not withdrawn) prior to the Fundamental Change Expiration Time will be made promptly (but in no event more than five (5) Business Days) following the Repurchase Date by mailing checks for the amount payable to the holders of such Notes entitled thereto as they shall appear on the registry books of the Company.

(e) In the case of a reclassification, change, consolidation, merger, combination, sale or conveyance to which Section 15.06 applies, in which the Common Stock of the Company is changed or exchanged as a result into the right to receive stock, securities or other property or assets (including cash), which includes shares of Common Stock of the Company or shares of common stock of another Person that are, or upon issuance will be, traded on a United States national securities exchange or approved for trading on an established automated over-the-counter trading market in the United States and such shares constitute at the time such change or exchange becomes effective in excess of 50% of the aggregate fair market value of such stock, securities or other property or assets (including cash) (as determined by the Company, which determination shall be conclusive and binding), then the Person formed by such consolidation or resulting from such merger or which acquires such assets, as the case may be, shall execute and deliver to the Trustee a supplemental indenture (accompanied by an Opinion of Counsel that such supplemental indenture complies with the Trust Indenture Act as in force at the date of execution of such supplemental indenture) modifying the provisions of this Indenture relating to the right of holders of the Notes to cause the Company to repurchase the Notes following a Fundamental Change, including without limitation the applicable provisions of this Section

3.05 and the definitions of Common Stock and Fundamental Change, as appropriate, as determined in good faith by the Company (which determination shall be conclusive and binding), to make such provisions apply to such other Person if different from the Company and the common stock issued by such Person (in lieu of the Company and the Common Stock of the Company).

(f) The Company will comply with the provisions of Rule 13e-4 and any other tender offer rules under the Exchange Act to the extent then applicable in connection with the redemption rights of the holders of Notes in the event of a Fundamental Change.

ARTICLE 4

SUBORDINATION OF NOTES

SECTION 4.1. Notes Subordinate to Senior Indebtedness. The Company covenants and agrees, and each Holder of a Note, by his acceptance thereof, likewise covenants and agrees, that, to the extent and in the manner hereinafter set forth in this Article 4 (subject to the provisions of Article 13), the indebtedness represented by the Notes and the payment of the principal of (and premium, if any) and interest on each and all of the Notes are hereby expressly made subordinate and subject in right of payment to the prior payment in full of all Senior Indebtedness. Whenever in this Article 4 there is a reference, in any context, to the principal of any Note as of any time, such reference shall be deemed to include reference to the redemption price payable in respect of such Note to the extent that such redemption price is, was or would be so payable at such time, and express mention of the redemption price in any provision of this Article 4 shall not be construed as excluding the redemption price in those provisions of this Article 4 when such express mention is not made.

SECTION 4.2. Payment over of Proceeds upon Dissolution, Etc. In the event of (a) any insolvency or bankruptcy case or proceeding, or any receivership, liquidation, reorganization or other similar case or proceeding in connection therewith, relative to the Company or to its creditors, as such, or to its assets, or (b) any liquidation, dissolution or other winding up of the Company, whether voluntary or involuntary and whether or not involving insolvency or bankruptcy, or (c) any assignment for the benefit of creditors or any other marshalling of assets and liabilities of the Company, then and in any such event the holders of Senior Indebtedness shall be entitled to receive payment in full of all amounts due or to become due on or in respect of all Senior Indebtedness in cash or other immediately available funds, or provision shall be made for such payment in cash

or other immediately available funds or otherwise in a manner satisfactory to each holder of Senior Indebtedness with respect to its indebtedness, before the Noteholders are entitled to receive any payment on account of principal of (or premium, if any) or interest on the Notes, and to that end the holders of Senior Indebtedness shall be entitled to receive, for application to the payment thereof, any payment or distribution of any kind or character, whether in cash, property or securities, which may be payable or deliverable in respect of the Notes in any such case, proceeding, dissolution, liquidation or other winding up or event. In the event that, notwithstanding the foregoing provisions of this Section, the Trustee or any Noteholder shall have received any payment or distribution of assets of the Company of any kind or character, whether in cash, securities or other property, before all Senior Indebtedness is paid in full or payment thereof provided for, and if such fact shall, at or prior to the time of such payment or distribution, have been made actually known to a Responsible Officer of the Trustee or, as the case may be, such Noteholder, then and in such event such payment or distribution shall be paid over or delivered forthwith to the trustee in bankruptcy, receiver, liquidating trustee, custodian, assignee, agent or other Person making payment or distribution of assets of the Company for application to the payment of all Senior Indebtedness remaining unpaid, to the extent necessary to pay all Senior Indebtedness in full, after giving effect to any concurrent payment or distribution to or for the holders of Senior Indebtedness. For purposes of this Article 4 only, the words "cash, securities or other property" shall not be deemed to include shares of stock of the Company as reorganized or readjusted, or securities of the Company or any other corporation provided for by a plan of reorganization or readjustment which shares of stock are subordinated in right of payment to all then outstanding Senior Indebtedness to substantially the same extent as, or to a greater extent than, the Notes are so subordinated as provided in this Article 4. The consolidation of the Company with, or the merger of the Company into, another Person or the liquidation or dissolution of the Company following the conveyance or transfer of its properties and assets substantially as an entirety to another Person upon the terms and conditions set forth in Article 12 shall not be deemed a dissolution, winding up, liquidation, reorganization, assignment for the benefit of creditors or marshalling of assets and liabilities of the Company for the purposes of this Section if the Person formed by such consolidation or into which the Company is merged or which acquires by conveyance or transfer such properties and assets substantially as an entirety, as the case may be, shall, as a part of such consolidation, merger, conveyance or transfer, comply with the conditions set forth in Article 12.

SECTION 4.3. Prior Payment to Senior Indebtedness upon Acceleration of Notes. In the event that any Notes are declared due and payable before their maturity, then and in such event the holders of the Senior Indebtedness outstanding at the time such Notes so become due and payable shall be entitled to

receive payment in full of all amounts due or to become due on or in respect of such Senior Indebtedness, or provision shall be made for such payment in money or money's worth, before the Noteholders are entitled to receive any payment by the Company on account of the principal of (or premium, if any) or interest on the Notes or on account of the purchase or other acquisition of Notes. In the event that, notwithstanding the foregoing, the Company shall make any payment to the Trustee or any Noteholder prohibited by the foregoing provisions of this Section, and if such fact shall, at or prior to the time of such payment, have been made actually known to a Responsible Officer of the Trustee or, as the case may be, such Noteholder, then and in such event such payment shall be paid over and delivered forthwith to the Company. The provisions of this Section shall not apply to any payment with respect to which Section 4.02 would be applicable.

SECTION 4.4. No Payment When Senior Indebtedness in Default. (a) In the event and during the continuation of any default in the payment of principal of (or premium, if any) or interest on (including a default under any redemption or repurchase obligation with respect to) any Senior Indebtedness beyond any applicable grace period with respect thereto or in the event that any other event of default with respect to any Senior Indebtedness shall have occurred and be continuing which would then permit the holders of such Senior Indebtedness to declare such Senior Indebtedness due and payable prior to the date on which it would otherwise have become due and payable, unless and until such event of default shall have been cured or waived or shall have ceased to exist after written notice to the Company and the Trustee by any holder of such Senior Indebtedness, or (b) in the event any judicial proceeding shall be pending with respect to any such default in payment or event of default, then no payment shall be made by the Company on account of principal of (or premium, if any) or interest on the Notes or on account of the purchase, redemption or other acquisition of Notes. In the event that, notwithstanding the foregoing, the Company shall make any payment to the Trustee or any Noteholder prohibited by the foregoing provisions of this Section, and if such fact shall, at or prior to the time of such payment, have been made known to the Trustee or, as the case may be, such Noteholder, then and in such event such payment shall be paid over and delivered forthwith to the Company, in the case of the Trustee, or the Trustee, in the case of such Noteholder. The provisions of this Section shall not apply to any payment with respect to which Section 4.02 would be applicable.

SECTION 4.5. Payment Permitted If No Default. Nothing contained in this Article 4 or elsewhere in this Indenture or in any of the Notes shall prevent (a) the Company, at any time except during the pendency of any case, proceeding, dissolution, liquidation or other winding up, assignment for the benefit of creditors or other marshalling of assets and liabilities of the Company referred to in Section 4.02, or under the conditions described in Sections 4.03 and 4.04, from

making payments at any time of principal of (and premium, if any) or interest on the Notes, or (b) the application by the Trustee of any money deposited with it hereunder to the payment of or on account of the principal of (and premium, if any) or interest on the Notes or the retention of such payment by the Noteholders, if, at the time of such application by the Trustee, a Responsible Officer of the Trustee did not have knowledge that such payment would have been prohibited by the provisions of this Article 4.

SECTION 4.6. Subrogation to Rights of Holders of Senior Indebtedness . Subject to the payment in full of all Senior Indebtedness, the holders of the Notes shall be subrogated to the extent of the payments or distributions made to the holders of such Senior Indebtedness pursuant to the provisions of this Article 4 to the rights of the holders of such Senior Indebtedness to receive payments and distributions of cash, property and securities applicable to the Senior Indebtedness until the principal of (and premium, if any) and interest on the Notes shall be paid in full. For purposes of such subrogation, no payments or distributions to the holders of the Senior Indebtedness of any cash, property or securities to which the holders of the Notes or the Trustee would be entitled except for the provisions of this Article 4, and no payments over pursuant to the provisions of this Article to the holders of Senior Indebtedness by holders of the Notes or the Trustee, shall, as among the Company, its creditors other than holders of Senior Indebtedness and the holders of the Notes, be deemed to be a payment or distribution by the Company to or on account of the Senior Indebtedness.

SECTION 4.7. Provisions Solely to Define Relative Rights. The provisions of this Article 4 are and are intended solely for the purpose of defining the relative rights of the holders of the Notes on the one hand and the holders of Senior Indebtedness on the other hand. Nothing contained in this Article 4 or elsewhere in this Indenture or in the Notes is intended to or shall (a) impair, as among the Company, its creditors other than holders of Senior Indebtedness and the holders of the Notes, the obligation of the Company, which is absolute and unconditional, to pay to the holders of the Notes the principal of (and premium, if any) and interest on the Notes as and when the same shall become due and payable in accordance with their terms; or (b) affect the relative rights against the Company of the holders of the Notes and creditors of the Company other than the holders of Senior Indebtedness; or (c) prevent the Trustee or the holder of any Note from exercising all remedies otherwise permitted by applicable law upon default under this Indenture, subject to the rights, if any, under this Article 4 of the holders of Senior Indebtedness to receive cash, property and securities otherwise payable or deliverable to the Trustee or such Holder.

SECTION 4.8. Trustee to Effectuate Subordination. Each holder of a Note by his acceptance thereof authorizes and directs the Trustee on his behalf to take

such action as may be necessary or appropriate to effectuate the subordination provided in this Article 4 and appoints the Trustee his attorney-in-fact for any and all such purposes.

SECTION 4.9. No Waiver of Subordination Provisions. No right of any present or future holder of any Senior Indebtedness to enforce subordination as herein provided shall at any time in any way be prejudiced or impaired by any act or failure to act on the part of the Company or by any act or failure to act, in good faith, by any such holder of any Senior Indebtedness, or by any non-compliance by the Company with the terms, provisions and covenants of this Indenture, regardless of any knowledge thereof any such holder may have or be otherwise charged with. Without in any way limiting the generality of the foregoing paragraph, the holders of Senior Indebtedness may, at any time and from time to time, without the consent of or notice to the Trustee or the holders of the Notes, without incurring responsibility to the holders of the Notes and without impairing or releasing the subordination provided in this Article 4 or the obligations hereunder of the holders of the Notes to the holders of Senior Indebtedness, do any one or more of the following: (i) change the manner, place or terms of payment or extend the time for payment of, or renew, increase or alter, Senior Indebtedness, or otherwise amend or supplement in any manner Senior Indebtedness or any instrument evidencing the same or any agreement under which Senior Indebtedness is outstanding; (ii) sell, exchange, release or otherwise deal with any property pledged, mortgaged or otherwise securing Senior Indebtedness; (iii) release any Person liable in any manner for the collection of Senior Indebtedness; and (iv) exercise or refrain from exercising any rights against the Company and any other Person.

SECTION 4.10. Notice to Trustee. The Company shall give prompt written notice to the Trustee of any fact known to the Company which would prohibit the making of any payment to or by the Trustee in respect of the Notes. Notwithstanding the provisions of this Article 4 or any other provision of this Indenture, the Trustee shall not be charged with knowledge of the existence of any facts which would prohibit the making of any payment to or by the Trustee in respect of the Notes, unless and until the Trustee shall have received written notice thereof from the Company or a holder of Senior Indebtedness or from any trustee therefor; and, prior to the receipt of any such written notice, the Trustee, subject to the provisions of Section 8.01, shall be entitled in all respects to assume that no such facts exist; provided that if the Trustee shall not have received the notice provided for in this Section 4.10 at least two Business Days prior to the date upon which by the terms hereof any money may become payable for any purpose (including, without limitation, the payment of the principal of (and premium, if any) or interest on any Note), then, anything herein contained to the contrary notwithstanding, the Trustee shall have full power and authority to

receive such money and to apply the same to the purpose for which such money was received and shall not be affected by any notice to the contrary which may be received by it within two Business Days prior to such date. Notwithstanding anything in this Article 4 to the contrary, nothing shall prevent any payment by the Trustee to the holders of monies deposited with it pursuant to Section 13.01, and any such payment shall not be subject to the provisions of Sections 4.02, 4.03 or 4.04. Subject to the provisions of Article 8, the Trustee shall be entitled to conclusively rely on the delivery to it of a written notice by a Person representing himself to be a holder of Senior Indebtedness (or a trustee thereof) to establish that such notice has been given by a holder of Senior Indebtedness (or a trustee therefor). In the event that the Trustee determines in good faith that further evidence is required with respect to the right of any Person as a holder of Senior Indebtedness to participate in any payment or distribution pursuant to this Article 4, the Trustee may request such Person to furnish evidence to the reasonable satisfaction of the Trustee as to the amount of Senior Indebtedness held by such Person, the extent to which such Person is entitled to participate in such payment or distribution and any other facts pertinent to the rights of such Person under this Article 4, and if such evidence is not furnished, the Trustee may defer any payment to such Person pending judicial determination as to the right of such Person to receive such payment.

SECTION 4.11. Reliance on Judicial Order or Certificate of Liquidating Agent. Upon any payment or distribution of assets of the Company referred to in this Article 4, the Trustee, subject to the provisions of Section 8.01, and the holders of the Notes shall be entitled to conclusively rely upon any order or decree entered by any court of competent jurisdiction in which such insolvency, bankruptcy, receivership, liquidation, reorganization, dissolution, winding up or similar case or proceeding is pending, or a certificate of the trustee in bankruptcy, receiver, liquidating trustee, custodian, assignee for the benefit of creditors, agent or other Person making such payment or distribution, delivered to the Trustee or to the holders of Notes, for the purpose of ascertaining the Persons entitled to participate in such payment or distribution, the holders of the Senior Indebtedness and other indebtedness of the Company, the amount thereof or payable thereon, the amount or amounts paid or distributed thereon and all other facts pertinent thereto or to this Article 4.

SECTION 4.12. Trustee Not Fiduciary for Holders of Senior Indebtedness. The Trustee shall not be deemed to owe any fiduciary duty to the holders of Senior Indebtedness and shall not be liable to any such holders if it shall in good faith mistakenly pay over or distribute to holders of Notes or to the Company or to any other Person cash, property or securities to which any holders of Senior Indebtedness shall be entitled by virtue of this Article 4 or otherwise.

SECTION 4.13. Rights of Trustee as Holder of Senior Indebtedness; Preservation of Trustee's Rights. The Trustee in its individual capacity shall be entitled to all the rights set forth in this Article 4 with respect to any Senior Indebtedness which may at any time be held by it, to the same extent as any other holder of Senior Indebtedness, and nothing in this Indenture shall deprive the Trustee of any of its rights as such holder. Nothing in this Article 4 shall apply to claims of, or payments to, the Trustee under or pursuant to Section 8.06.

SECTION 4.14. Article Applicable to Paying Agents. In case at any time any Paying Agent other than the Trustee shall have been appointed by the Company and be then acting hereunder, the term "Trustee" as used in this Article 4 shall in such case (unless the context otherwise requires) be construed as extending to and including such Paying Agent within its meaning as fully for all intents and purposes as if such Paying Agent were named in this Article 4 in addition to or in place of the Trustee; provided that Section 4.13 shall not apply to the Company or any Affiliate of the Company if it or such Affiliate acts as Paying Agent.

SECTION 4.15. Certain Conversions Deemed Payment. For the purposes of this Article 4 only, (1) the issuance and delivery of junior securities upon conversion of Notes in accordance with Article 15 shall not be deemed to constitute a payment or distribution on account of the principal of or premium or interest on Notes or on account of the purchase or other acquisition of Notes, and (2) the payment, issuance or delivery of cash, property or securities (other than junior securities) upon conversion of a Note shall be deemed to constitute payment on account of the principal of such Note. For the purposes of this Section 4.15, the term "junior securities" means (a) shares of any stock of any class of the Company and any cash, securities or other property into which the Notes are convertible pursuant to Article 15 and (b) securities of the Company which are subordinated in right of payment to all Senior Indebtedness which may be outstanding at the time of issuance or delivery of such securities to substantially the same extent as, or to a greater extent than, the Notes are so subordinated as provided in this Article 4. Nothing contained in this Article 4 or elsewhere in this Indenture or in the Notes is intended to or shall impair, as among the Company, its creditors other than holders of Senior Indebtedness and the holders of the Notes, the right, which is absolute and unconditional, of the holder of any Note to convert such Note in accordance with Article 15.

SECTION 4.16. 6.00% Convertible Subordinated Notes Due June 1, 2004 . The indebtedness evidenced by the Notes is neither superior nor subordinated in right of payment to, and is pari passu with, the Company's 6.00% Convertible Subordinated Notes due June 1, 2004.

ARTICLE 5

PARTICULAR COVENANTS OF THE COMPANY

SECTION 5.1. Payment of Principal, Premium and Interest. The Company covenants and agrees that it will duly and punctually pay or cause to be paid the principal of and premium, if any (including the redemption price upon redemption pursuant to Article 3), and interest, on each of the Notes at the places, at the respective times and in the manner provided herein and in the Notes. The Company covenants and agrees to pay interest on overdue principal, premium, if any, or (to the extent that payment of such interest is enforceable under applicable law) interest at the rate per annum specified in the Notes.

SECTION 5.2. Maintenance of Office or Agency. The Company will maintain an office or agency in the Borough of Manhattan, the City of New York, where the Notes may be surrendered for registration of transfer or exchange or for presentation for payment or for conversion or redemption and where notices and demands to or upon the Company in respect of the Notes and this Indenture may be served. The Company will give prompt written notice to the Trustee of the location, and any change in the location, of such office or agency not designated or appointed by the Trustee. If at any time the Company shall fail to maintain any such required office or agency or shall fail to furnish the Trustee with the address thereof, such presentations, surrenders, notices and demands may be made or served at the Corporate Trust Office or the office of agency of the Trustee in The Borough of Manhattan, The City of New York (which shall initially be The Bank of Nova Scotia Trust Company of New York, located at One Liberty Plaza, New York, New York).

The Company may also from time to time designate co-registrars and one or more offices or agencies where the Notes may be presented or surrendered for any or all such purposes and may from time to time rescind such designations. The Company will give prompt written notice of any such designation or rescission and of any change in the location of any such other office or agency.

The Company hereby initially designates the Trustee as paying agent, Note registrar, Custodian and conversion agent and each of the Corporate Trust Office and the office of agency of the Trustee in The Borough of Manhattan, c/o The Bank of Nova Scotia Trust Company of New York, One Liberty Plaza, New York, New York 10006, shall be considered as one such office or agency of the Company for each of the aforesaid purposes.

So long as the Trustee is the Note registrar, the Trustee agrees to mail, or cause to be mailed, the notices set forth in Section 8.10(a) and the third paragraph of Section 8.11. If co-registrars have been appointed in accordance with this Section, the Trustee shall mail such notices only to the Company and the holders of Notes it can identify from its records.

SECTION 5.3. Appointments to Fill Vacancies in Trustee's Office. The Company, whenever necessary to avoid or fill a vacancy in the office of Trustee, will appoint, in the manner provided in Section 8.10, a Trustee, so that there shall at all times be a Trustee hereunder.

SECTION 5.4. Provisions as to Paying Agent. (a) If the Company shall appoint a paying agent other than the Trustee, or if the Trustee shall appoint such a paying agent, the Company will cause such paying agent to execute and deliver to the Trustee an instrument in which such agent shall agree with the Trustee, subject to the provisions of this Section 5.04:

(1) that it will hold all sums held by it as such agent for the payment of the principal of and premium, if any, or interest on the Notes (whether such sums have been paid to it by the Company or by any other obligor on the Notes) in trust for the benefit of the holders of the Notes;

(2) that it will give the Trustee notice of any failure by the Company (or by any other obligor on the Notes) to make any payment of the principal of and premium, if any, or interest on the Notes when the same shall be due and payable; and

(3) that at any time during the continuance of an Event of Default, upon request of the Trustee, it will forthwith pay to the Trustee all sums so held in trust.

The Company shall, on or before each due date of the principal of, premium, if any, or interest on the Notes, deposit with the paying agent a sum (in funds which are immediately available on the due date for such payment) sufficient to pay such principal, premium, if any, or interest, and (unless such paying agent is the Trustee) the Company will promptly notify the Trustee of any failure to take such action; provided that if such deposit is made on the due date, such deposit shall be received by the paying agent by 10:00 a.m. New York City time, on such date.

(b) If the Company shall act as its own paying agent, it will, on or before each due date of the principal of, premium, if any, or interest on the Notes, set aside, segregate and hold in trust for the benefit of the holders of the Notes a sum

sufficient to pay such principal, premium, if any, or interest so becoming due and will promptly notify the Trustee of any failure to take such action and of any failure by the Company (or any other obligor under the Notes) to make any payment of the principal of, premium, if any, or interest on the Notes when the same shall become due and payable.

(c) Anything in this Section 5.04 to the contrary notwithstanding, the Company may, at any time, for the purpose of obtaining a satisfaction and discharge of this Indenture, or for any other reason, pay or cause to be paid to the Trustee all sums held in trust by the Company or any paying agent hereunder as required by this Section 5.04, such sums to be held by the Trustee upon the trusts herein contained and upon such payment by the Company or any paying agent to the Trustee, the Company or such paying agent shall be released from all further liability with respect to such sums.

(d) Anything in this Section 5.04 to the contrary notwithstanding, the agreement to hold sums in trust as provided in this Section 5.04 is subject to Sections 13.03 and 13.04.

The Trustee shall not be responsible for the actions of any other paying agents (including the Company if acting as its own paying agent) and shall have no control of any funds held by such other paying agents.

SECTION 5.5. Existence. Subject to Article 12, the Company will do or cause to be done all things necessary to preserve and keep in full force and effect its existence and rights (charter and statutory); provided that the Company shall not be required to preserve any such right if the Company shall determine that the preservation thereof is no longer desirable in the conduct of the business of the Company and that the loss thereof is not disadvantageous in any material respect to the Noteholders.

SECTION 5.6. Maintenance of Properties. The Company will cause all properties used or useful in the conduct of its business or the business of any Significant Subsidiary to be maintained and kept in good condition, repair and working order and supplied with all necessary equipment and will cause to be made all necessary repairs, renewals, replacements, betterments and improvements thereof, all as in the judgment of the Company may be necessary so that the business carried on in connection therewith may be properly and advantageously conducted at all times; provided that nothing in this Section shall prevent the Company from discontinuing the operation or maintenance of any of such properties if such discontinuance is, in the judgment of the Company, desirable in the conduct of its business or the business of any subsidiary and not disadvantageous in any material respect to the Noteholders.

SECTION 5.7. Payment of Taxes and Other Claims. The Company will pay or discharge, or cause to be paid or discharged, before the same may become delinquent, (i) all taxes, assessments and governmental charges levied or imposed upon the Company or any Significant Subsidiary or upon the income, profits or property of the Company or any Significant Subsidiary, (ii) all claims for labor, materials and supplies which, if unpaid, might by law become a lien or charge upon the property of the Company or any Significant Subsidiary and (iii) all stamp and other duties, if any, which may be imposed by the United States or any political subdivision thereof or therein in connection with the issuance, transfer, exchange or conversion of any Notes or with respect to this Indenture; provided that, in the case of clauses (i) and (ii), the Company shall not be required to pay or discharge or cause to be paid or discharged any such tax, assessment, charge or claim (A) if the failure to do so will not, in the aggregate, have a material adverse impact on the Company, or (B) if the amount, applicability or validity is being contested in good faith by appropriate proceedings.

SECTION 5.8. Rule 144A Information Requirement. Within the period prior to the expiration of the holding period applicable to sales thereof under Rule 144(k) under the Securities Act (or any successor provision), the Company covenants and agrees that it shall, during any period in which it is not subject to Section 13 or 15(d) under the Exchange Act, make available to any holder or beneficial holder of Notes or any Common Stock issued upon conversion thereof which continue to be Restricted Securities in connection with any sale thereof and any prospective purchaser of Notes or such Common Stock designated by such holder or beneficial holder, the information required pursuant to Rule 144A(d)(4) under the Securities Act upon the request of any holder or beneficial holder of the Notes or such Common Stock and it will take such further action as any holder or beneficial holder of such Notes or such Common Stock may reasonably request, all to the extent required from time to time to enable such holder or beneficial holder to sell its Notes or Common Stock without registration under the Securities Act within the limitation of the exemption provided by Rule 144A, as such Rule may be amended from time to time. Upon the request of any holder or any beneficial holder of the Notes or such Common Stock, the Company will deliver to such holder a written statement as to whether it has complied with such requirements.

SECTION 5.9. Stay, Extension and Usury Laws. The Company covenants (to the extent that it may lawfully do so) that it shall not at any time insist upon, plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay, extension or usury law or other law which would prohibit or forgive the Company from paying all or any portion of the principal of, premium, if any, or interest on the Notes as contemplated herein, wherever enacted, now or at any time hereafter in force, or which may affect the covenants or the performance of

this Indenture and the Company (to the extent it may lawfully do so) hereby expressly waives all benefit or advantage of any such law, and covenants that it will not, by resort to any such law, hinder, delay or impede the execution of any power herein granted to the Trustee, but will suffer and permit the execution of every such power as though no such law had been enacted.

SECTION 5.10. Compliance Certificate. The Company shall deliver to the Trustee, within one hundred twenty (120) days after the end of each fiscal year of the Company, a certificate signed by either the principal executive officer, principal financial officer or principal accounting officer of the Company, stating whether or not to the best knowledge of the signer thereof the Company is in default in the performance and observance of any of the terms, provisions and conditions of this Indenture (without regard to any period of grace or requirement of notice provided hereunder) and, if the Company shall be in default, specifying all such defaults and the nature and the status thereof of which the signer may have knowledge.

The Company will deliver to the Trustee, forthwith upon becoming aware of (i) any default in the performance or observance of any covenant, agreement or condition contained in this Indenture, or (ii) any Event of Default, an Officers' Certificate specifying with particularity such default or Event of Default and further stating what action the Company has taken, is taking or proposes to take with respect thereto.

Any notice required to be given under this Section 5.10 or Section 4.10 shall be delivered to a Responsible Officer of the Trustee at its Corporate Trust Office. In the event that the payment of the Notes is accelerated because of an Event of Default, the Company shall promptly provide written notice to the Trustee specifying the names and addresses of the holders of Senior Indebtedness if the Trustee (and not the Company) is to provide holders of Senior Indebtedness notice of such acceleration.

SECTION 5.11. Liquidated Damages Notice. In the event that the Company is required to pay Liquidated Damages to holders of Notes pursuant to the Registration Rights Agreement, the Company will provide written notice ("LIQUIDATED DAMAGES NOTICE") to the Trustee of its obligation to pay Liquidated Damages no later than fifteen days prior to the proposed payment date for the Liquidated Damages, and the Liquidated Damages Notice shall set forth the amount of Liquidated Damages to be paid by the Company on such payment date. The Trustee shall not at any time be under any duty to responsibility to any holder of Notes to determine the Liquidated Damages, or with respect to the nature, extent or calculation of the amount of Liquidated Damages when made, or with respect to the method employed in such calculation of the Liquidated Damages.

ARTICLE 6

NOTEHOLDERS' LISTS AND REPORTS BY THE COMPANY AND THE TRUSTEE

SECTION 6.1. Noteholders' Lists. The Company covenants and agrees that it will furnish or cause to be furnished to the Trustee, semiannually, not more than fifteen (15) days after each June 1 and December 1 in each year beginning with June 1, 2002, and at such other times as the Trustee may request in writing, within thirty (30) days after receipt by the Company of any such request (or such lesser time as the Trustee may reasonably request in order to enable it to timely provide any notice to be provided by it hereunder), a list in such form as the Trustee may reasonably require of the names and addresses of the holders of Notes as of a date not more than fifteen (15) days (or such other date as the Trustee may reasonably request in order to so provide any such notices) prior to the time such information is furnished, except that no such list need be furnished by the Company to the Trustee so long as the Trustee is acting as the sole Note registrar.

SECTION 6.2. Preservation and Disclosure of Lists. (a) The Trustee shall preserve, in as current a form as is reasonably practicable, all information as to the names and addresses of the holders of Notes contained in the most recent list furnished to it as provided in Section 6.01 or maintained by the Trustee in its capacity as Note registrar or co-registrar in respect of the Notes, if so acting. The Trustee may destroy any list furnished to it as provided in Section 6.01 upon receipt of a new list so furnished.

(b) The rights of Noteholders to communicate with other holders of Notes with respect to their rights under this Indenture or under the Notes, and the corresponding rights and duties of the Trustee, shall be as provided by the Trust Indenture Act.

(c) Every Noteholder, by receiving and holding the same, agrees with the Company and the Trustee that neither the Company nor the Trustee nor any agent of either of them shall be held accountable by reason of any disclosure of information as to names and addresses of holders of Notes made pursuant to the Trust Indenture Act.

SECTION 6.3. Reports by Trustee. (a) Within sixty (60) days after December 1 of each year commencing with the year 2002, the Trustee shall transmit to holders of Notes such reports dated as of December 1 of the year in which such reports are made concerning the Trustee and its actions under this

Indenture as may be required pursuant to the Trust Indenture Act at the times and in the manner provided pursuant thereto.

(b) A copy of such report shall, at the time of such transmission to holders of Notes, be filed by the Trustee with each stock exchange and automated quotation system upon which the Notes are listed and with the Company. The Company will promptly notify the Trustee in writing when the Notes are listed on any stock exchange or automated quotation system or delisted therefrom.

SECTION 6.4. Reports by Company. The Company shall file with the Trustee (and the Commission if at any time after this Indenture becomes qualified under the Trust Indenture Act), and transmit to holders of Notes, such information, documents and other reports and such summaries thereof, as may be required pursuant to the Trust Indenture Act at the times and in the manner provided pursuant to such Act, whether or not the Notes are governed by such Act; provided that any such information, documents or reports required to be filed with the Commission pursuant to Section 13 or 15(d) of the Exchange Act shall be filed with the Trustee within fifteen (15) days after the same is so required to be filed with the Commission. Delivery of such reports, information and documents to the Trustee is for informational purposes only and the Trustee's receipt of such shall not constitute constructive notice of any information contained therein or determinable from information contained therein, including the Company's compliance with any of its covenants hereunder (as to which the Trustee is entitled to rely exclusively on Officers' Certificates).

ARTICLE 7

REMEDIES OF THE TRUSTEE AND NOTEHOLDERS ON AN EVENT OF DEFAULT

SECTION 7.1. Events of Default. In case one or more of the following Events of Default (whatever the reason for such Event of Default and whether it shall be voluntary or involuntary or be effected by operation of law or pursuant to any judgment, decree or order of any court or any order, rule or regulation of any administrative or governmental body) shall have occurred and be continuing:

(a) default in the payment of any installment of interest or Liquidated Damages upon any of the Notes as and when the same shall become due and payable, and continuance of such default for a period of thirty (30) days, whether or not such payment is permitted under Article 4 hereof; or

(b) default in the payment of the principal of or premium, if any, on any of the Notes as and when the same shall become due and payable either at maturity or in connection with any redemption pursuant to Article 3, by acceleration or otherwise, whether or not such payment is permitted under Article 4 hereof; or

(c) failure on the part of the Company duly to observe or perform any other of the covenants or agreements on the part of the Company in the Notes or in this Indenture (other than a covenant or agreement a default in whose performance or whose breach is elsewhere in this Section 7.01 specifically dealt with) continued for a period of sixty (60) days after the date on which written notice of such failure, requiring the Company to remedy the same, shall have been given to the Company by the Trustee, or the Company and a Responsible Officer of the Trustee by the holders of at least twenty-five percent (25%) in aggregate principal amount of the Notes at the time outstanding determined in accordance with Section 9.04;

(d) a default under any indebtedness of the Company for money borrowed or under any mortgage, indenture or instrument under which there may be issued or by which there may be secured or evidenced any indebtedness for money borrowed by the Company in an aggregate principal amount then outstanding in excess of \$15,000,000, whether such indebtedness now exists or shall hereafter be created, such indebtedness is not paid at final maturity (either upon its stated maturity or acceleration thereof) and such default in payment or acceleration has not been cured or rescinded, within a period of 30 days after there shall have been given, by registered or certified mail, to the Company by the Trustee or to the Company and the Trustee by the holders of at least 25% in aggregate principal amount of the outstanding Notes, a written notice specifying such default and requiring the Company to cause such indebtedness to be discharged or cause such default to be cured or waived or such acceleration to be rescinded or annulled and stating that such notice is a "Notice of Default" hereunder;

(e) the Company shall commence a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to the Company or its debts under any bankruptcy, insolvency or other similar law now or hereafter in effect or seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official of the Company or any substantial part of the property of the Company, or shall consent to any such relief or to the appointment of or taking possession by any such official in an involuntary case or other proceeding commenced against the Company, or shall make a general assignment for the benefit of creditors, or shall fail generally to pay its debts as they become due; or

(f) an involuntary case or other proceeding shall be commenced against the Company seeking liquidation, reorganization or other relief with respect to the Company or its debts under any bankruptcy, insolvency or other similar law now or hereafter in effect or seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official of the Company or any substantial part of the property of the Company, and such involuntary case or other proceeding shall remain undismissed and unstayed for a period of ninety (90) consecutive days;

then, and in each and every such case (other than an Event of Default specified in Section 7.01(e) or 7.01(f)), unless the principal of all of the Notes shall have already become due and payable, either the Trustee or the holders of not less than twenty-five percent (25%) in aggregate principal amount of the Notes then outstanding hereunder determined in accordance with Section 9.04, by notice in writing to the Company (and to the Trustee if given by Noteholders), may declare the principal of and premium, if any, on all the Notes and the interest and Liquidated Damages accrued thereon to be due and payable immediately, and upon any such declaration the same shall become and shall be immediately due and payable, anything in this Indenture or in the Notes contained to the contrary notwithstanding. If an Event of Default specified in Section 7.01(e) or 7.01(f) occurs, the principal of all the Notes and the interest and Liquidated Damages accrued thereon shall be immediately and automatically due and payable without necessity of further action. This provision, however, is subject to the conditions that if, at any time after the principal of the Notes shall have been so declared due and payable, and before any judgment or decree for the payment of the monies due shall have been obtained or entered as hereinafter provided, the Company shall pay or shall deposit with the Trustee a sum sufficient to pay all matured installments of interest upon all Notes and the principal of and premium, if any, on any and all Notes which shall have become due otherwise than by acceleration (with interest on overdue installments of interest (to the extent that payment of such interest is enforceable under applicable law) and on such principal and premium, if any, at the rate borne by the Notes, to the date of such payment or deposit) and amounts due to the Trustee pursuant to Section 8.06, and if any and all defaults under this Indenture, other than the nonpayment of principal of and premium, if any, and accrued interest and Liquidated Damages on Notes which shall have become due by acceleration, shall have been cured or waived pursuant to Section 7.07, then and in every such case the holders of a majority in aggregate principal amount of the Notes then outstanding, by written notice to the Company and to the Trustee, may waive all defaults or Events of Default and rescind and annul such declaration and its consequences; but no such waiver or rescission and annulment shall extend to or shall affect any subsequent default or Event of Default, or shall impair any right consequent thereon. The Company shall notify in writing a Responsible Officer of the Trustee, promptly upon becoming aware thereof, of any Event of Default.

In case the Trustee shall have proceeded to enforce any right under this Indenture and such proceedings shall have been discontinued or abandoned because of such waiver or rescission and annulment or for any other reason or shall have been determined adversely to the Trustee, then and in every such case the Company, the holders of Notes, and the Trustee shall be restored respectively to their several positions and rights hereunder, and all rights, remedies and powers of the Company, the holders of Notes, and the Trustee shall continue as though no such proceeding had been taken.

SECTION 7.2. Payments of Notes on Default; Suit Therefor. The Company covenants that (a) in case default shall be made in the payment of any installment of interest upon any of the Notes as and when the same shall become due and payable, and such default shall have continued for a period of thirty (30) days, or (b) in case default shall be made in the payment of the principal of or premium, if any, on any of the Notes as and when the same shall have become due and payable, whether at maturity of the Notes or in connection with any redemption, by or under this Indenture declaration or otherwise, then, upon demand of the Trustee, the Company will pay to the Trustee, for the benefit of the holders of the Notes, the whole amount that then shall have become due and payable on all such Notes for principal and premium, if any, or interest, as the case may be, with interest upon the overdue principal and premium, if any, and (to the extent that payment of such interest is enforceable under applicable law) upon the overdue installments of interest at the rate borne by the Notes, and, in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, including reasonable compensation to the Trustee, its agents, attorneys and counsel, and all other amounts due the Trustee under Section 8.06. Until such demand by the Trustee, the Company may pay the principal of and premium, if any, and interest on the Notes to the registered holders, whether or not the Notes are overdue.

In case the Company shall fail forthwith to pay such amounts upon such demand, the Trustee, in its own name and as trustee of an express trust, shall be entitled and empowered to institute any actions or proceedings at law or in equity for the collection of the sums so due and unpaid, and may prosecute any such action or proceeding to judgment or final decree, and may enforce any such judgment or final decree against the Company or any other obligor on the Notes and collect in the manner provided by law out of the property of the Company or any other obligor on the Notes wherever situated the monies adjudged or decreed to be payable.

In case there shall be pending proceedings for the bankruptcy or for the reorganization of the Company or any other obligor on the Notes under Title 11 of the United States Code, or any other applicable law, or in case a receiver, assignee

or trustee in bankruptcy or reorganization, liquidator, sequestrator or similar official shall have been appointed for or taken possession of the Company or such other obligor, the property of the Company or such other obligor, or in the case of any other judicial proceedings relative to the Company or such other obligor upon the Notes, or to the creditors or property of the Company or such other obligor, the Trustee, irrespective of whether the principal of the Notes shall then be due and payable as therein expressed or by declaration or otherwise and irrespective of whether the Trustee shall have made any demand pursuant to the provisions of this Section 7.02, shall be entitled and empowered, by intervention in such proceedings or otherwise, to file and prove a claim or claims for the whole amount of principal, premium, if any, and interest owing and unpaid in respect of the Notes, and, in case of any judicial proceedings, to file such proofs of claim and other papers or documents as may be necessary or advisable in order to have the claims of the Trustee and of the Noteholders allowed in such judicial proceedings relative to the Company or any other obligor on the Notes, its or their creditors, or its or their property, and to collect and receive any monies or other property payable or deliverable on any such claims, and to distribute the same after the deduction of any amounts due the Trustee under Section 8.06, and any receiver, assignee or trustee in bankruptcy or reorganization, liquidator, custodian or similar official is hereby authorized by each of the Noteholders to make such payments to the Trustee, and, in the event that the Trustee shall consent to the making of such payments directly to the Noteholders, to pay to the Trustee any amount due it for reasonable compensation, expenses, advances and disbursements, including counsel fees incurred by it up to the date of such distribution. To the extent that such payment of reasonable compensation, expenses, advances and disbursements out of the estate in any such proceedings shall be denied for any reason, payment of the same shall be secured by a lien on, and shall be paid out of, any and all distributions, dividends, monies, securities and other property which the holders of the Notes may be entitled to receive in such proceedings, whether in liquidation or under any plan of reorganization or arrangement or otherwise.

All rights of action and of asserting claims under this Indenture, or under any of the Notes, may be enforced by the Trustee without the possession of any of the Notes, or the production thereof at any trial or other proceeding relative thereto, and any such suit or proceeding instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment shall, after provision for the payment of the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, be for the ratable benefit of the holders of the Notes.

In any proceedings brought by the Trustee (and in any proceedings involving the interpretation of any provision of this Indenture to which the Trustee

shall be a party) the Trustee shall be held to represent all the holders of the Notes, and it shall not be necessary to make any holders of the Notes parties to any such proceedings.

SECTION 7.3. Application of Monies Collected by Trustee. Any monies collected by the Trustee pursuant to this Article 7 shall be applied in the order following, at the date or dates fixed by the Trustee for the distribution of such monies, upon presentation of the several Notes, and stamping thereon the payment, if only partially paid, and upon surrender thereof, if fully paid:

FIRST: To the payment of all amounts due the Trustee under Section 8.06;

SECOND: Subject to the provisions of Article 4, in case the principal of the outstanding Notes shall not have become due and be unpaid, to the payment of interest on the Notes in default in the order of the maturity of the installments of such interest, with interest (to the extent that such interest has been collected by the Trustee) upon the overdue installments of interest at the rate borne by the Notes, such payments to be made ratably to the Persons entitled thereto;

THIRD: Subject to the provisions of Article 4, in case the principal of the outstanding Notes shall have become due, by declaration or otherwise, and be unpaid to the payment of the whole amount then owing and unpaid upon the Notes for principal and premium, if any, and interest, with interest on the overdue principal and premium, if any, and (to the extent that such interest has been collected by the Trustee) upon overdue installments of interest at the rate borne by the Notes, and in case such monies shall be insufficient to pay in full the whole amounts so due and unpaid upon the Notes, then to the payment of such principal and premium, if any, and interest without preference or priority of principal and premium, if any, over interest, or of interest over principal and premium, if any, or of any installment of interest over any other installment of interest, or of any Note over any other Note, ratably to the aggregate of such principal and premium, if any, and accrued and unpaid interest; and

FOURTH: Subject to the provisions of Article 4, to the payment of the remainder, if any, to the Company or any other Person lawfully entitled thereto.

SECTION 7.4. Proceedings by Noteholder. No holder of any Note shall have any right by virtue of or by reference to any provision of this Indenture to institute any suit, action or proceeding in equity or at law upon or under or with

respect to this Indenture, or for the appointment of a receiver, trustee, liquidator, custodian or other similar official, or for any other remedy hereunder, unless such holder previously shall have given to the Trustee written notice of an Event of Default and of the continuance thereof, as hereinbefore provided, and unless also the holders of not less than twenty-five percent (25%) in aggregate principal amount of the Notes then outstanding shall have made written request upon the Trustee to institute such action, suit or proceeding in its own name as Trustee hereunder and shall have offered to the Trustee such reasonable indemnity as it may require against the costs, expenses and liabilities to be incurred therein or thereby, and the Trustee for sixty (60) days after its receipt of such notice, request and offer of indemnity, shall have neglected or refused to institute any such action, suit or proceeding and no direction inconsistent with such written request shall have been given to the Trustee pursuant to Section 7.07; it being understood and intended, and being expressly covenanted by the taker and holder of every Note with every other taker and holder and the Trustee, that no one or more holders of Notes shall have any right in any manner whatever by virtue of or by reference to any provision of this Indenture to affect, disturb or prejudice the rights of any other holder of Notes, or to obtain or seek to obtain priority over or preference to any other such holder, or to enforce any right under this Indenture, except in the manner herein provided and for the equal, ratable and common benefit of all holders of Notes (except as otherwise provided herein). For the protection and enforcement of this Section 7.04, each and every Noteholder and the Trustee shall be entitled to such relief as can be given either at law or in equity.

Notwithstanding any other provision of this Indenture and any provision of any Note, the right of any holder of any Note to receive payment of the principal of and premium, if any (including the redemption price upon redemption pursuant to Article 7), and accrued interest on such Note, on or after the respective due dates expressed in such Note or in the event of redemption, or to institute suit for the enforcement of any such payment on or after such respective dates against the Company shall not be impaired or affected without the consent of such holder.

Anything in this Indenture or the Notes to the contrary notwithstanding, the holder of any Note, without the consent of either the Trustee or the holder of any other Note, in its own behalf and for its own benefit, may enforce, and may institute and maintain any proceeding suitable to enforce, its rights of conversion as provided herein.

SECTION 7.5. Proceedings by Trustee. In case of an Event of Default, the Trustee may, in its discretion, proceed to protect and enforce the rights vested in it by this Indenture by such appropriate judicial proceedings as are necessary to protect and enforce any of such rights, either by suit in equity or by action at law

or by proceeding in bankruptcy or otherwise, whether for the specific enforcement of any covenant or agreement contained in this Indenture or in aid of the exercise of any power granted in this Indenture, or to enforce any other legal or equitable right vested in the Trustee by this Indenture or by law.

SECTION 7.6. Remedies Cumulative and Continuing. Except as provided in Section 2.06, all powers and remedies given by this Article 7 to the Trustee or to the Noteholders shall, to the extent permitted by law, be deemed cumulative and not exclusive of any thereof or of any other powers and remedies available to the Trustee or the holders of the Notes, by judicial proceedings or otherwise, to enforce the performance or observance of the covenants and agreements contained in this Indenture, and no delay or omission of the Trustee or of any holder of any of the Notes to exercise any right or power accruing upon any default or Event of Default occurring and continuing as aforesaid shall impair any such right or power, or shall be construed to be a waiver of any such default or any acquiescence therein, and, subject to the provisions of Section 7.04, every power and remedy given by this Article 7 or by law to the Trustee or to the Noteholders may be exercised from time to time, and as often as shall be deemed expedient, by the Trustee or by the Noteholders.

SECTION 7.7. Direction of Proceedings and Waiver of Defaults by Majority of Noteholders. The holders of a majority in aggregate principal amount of the Notes at the time outstanding determined in accordance with Section 9.04 shall have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on the Trustee; provided that (a) such direction shall not be in conflict with any rule of law or with this Indenture, (b) the Trustee may take any other action which is not inconsistent with such direction and (c) the Trustee may decline to take any action that would benefit some Noteholder to the detriment of other Noteholders. The holders of a majority in aggregate principal amount of the Notes at the time outstanding determined in accordance with Section 9.04 may, on behalf of the holders of all of the Notes, waive any past default or Event of Default hereunder and its consequences except (i) a default in the payment of interest or premium, if any, on, or the principal of, the Notes, (ii) a failure by the Company to convert any Notes into Common Stock, (iii) a default in the payment of redemption price pursuant to Article 3 or (iv) a default in respect of a covenant or provisions hereof which under Article 11 cannot be modified or amended without the consent of the holders of each or all Notes then outstanding or affected thereby. Upon any such waiver, the Company, the Trustee and the holders of the Notes shall be restored to their former positions and rights hereunder; but no such waiver shall extend to any subsequent or other default or Event of Default or impair any right consequent thereon. Whenever any default or Event of Default hereunder shall have been waived as permitted by this Section 7.07, said default

or Event of Default shall for all purposes of the Notes and this Indenture be deemed to have been cured and to be not continuing; but no such waiver shall extend to any subsequent or other default or Event of Default or impair any right consequent thereon.

SECTION 7.8. Notice of Defaults. The Trustee shall, within ninety (90) days after a Responsible Officer of the Trustee has knowledge of the occurrence of a default, mail to all Noteholders, as the names and addresses of such holders appear upon the Note register, notice of all defaults known to a Responsible Officer, unless such defaults shall have been cured or waived before the giving of such notice; provided that except in the case of default in the payment of the principal of, or premium, if any, or interest on any of the Notes, the Trustee shall be protected in withholding such notice if and so long as a trust committee of directors and/or Responsible Officers of the Trustee in good faith determines that the withholding of such notice is in the interests of the Noteholders.

SECTION 7.9. Undertaking to Pay Costs. All parties to this Indenture agree, and each holder of any Note by his acceptance thereof shall be deemed to have agreed, that any court may, in its discretion, require, in any suit for the enforcement of any right or remedy under this Indenture, or in any suit against the Trustee for any action taken or omitted by it as Trustee, the filing by any party litigant in such suit of an undertaking to pay the costs of such suit and that such court may in its discretion assess reasonable costs, including reasonable attorneys' fees and expenses, against any party litigant in such suit, having due regard to the merits and good faith of the claims or defenses made by such party litigant; provided that the provisions of this Section 7.09 (to the extent permitted by law) shall not apply to any suit instituted by the Trustee, to any suit instituted by any Noteholder, or group of Noteholders, holding in the aggregate more than ten percent in principal amount of the Notes at the time outstanding determined in accordance with Section 9.04, or to any suit instituted by any Noteholder for the enforcement of the payment of the principal of or premium, if any, or interest on any Note on or after the due date expressed in such Note or to any suit for the enforcement of the right to convert any Note in accordance with the provisions of Article 15.

ARTICLE 8

THE TRUSTEE

SECTION 8.1. Duties and Responsibilities of Trustee. The Trustee, prior to the occurrence of an Event of Default and after the curing of all Events of Default which may have occurred, undertakes to perform such duties and only such duties as are specifically set forth in this Indenture. In case an Event of Default has

occurred (which has not been cured or waived), the Trustee shall exercise such of the rights and powers vested in it by this Indenture, and use the same degree of care and skill in their exercise, as a prudent person would exercise or use under the circumstances in the conduct of his own affairs.

No provision of this Indenture shall be construed to relieve the Trustee from liability for its own negligent action, its own negligent failure to act or its own willful misconduct, except that:

(a) prior to the occurrence of an Event of Default and after the curing or waiving of all Events of Default which may have occurred:

(i) the duties and obligations of the Trustee shall be determined solely by the express provisions of this Indenture and the Trust Indenture Act, and the Trustee shall not be liable except for the performance of such duties and obligations as are specifically set forth in this Indenture and no implied covenants or obligations shall be read into this Indenture and the Trust Indenture Act against the Trustee; and

(ii) in the absence of bad faith and willful misconduct on the part of the Trustee, the Trustee may conclusively rely as to the truth of the statements and the correctness of the opinions expressed therein, upon any certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture; but, in the case of any such certificates or opinions which by any provisions hereof are specifically required to be furnished to the Trustee, the Trustee shall be under a duty to examine the same to determine whether or not they conform to the requirements of this Indenture;

(b) the Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer or Officers of the Trustee, unless the Trustee was negligent in ascertaining the pertinent facts;

(c) the Trustee shall not be liable with respect to any action taken or omitted to be taken by it in good faith in accordance with the written direction of the holders of not less than a majority in principal amount of the Notes at the time outstanding determined as provided in Section 9.04 relating to the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee, under this Indenture;

(d) whether or not therein provided, every provision of this Indenture relating to the conduct or affecting the liability of, or affording protection to, the Trustee shall be subject to the provisions of this Section;

(e) the Trustee shall not be liable in respect of any payment (as to the correctness of amount, entitlement to receive or any other matters relating to payment) or notice effected by the Company or any paying agent or any records maintained by any co-registrar with respect to the Notes;

(f) if any party fails to deliver a notice relating to an event the fact of which, pursuant to this Indenture, requires notice to be sent to the Trustee, the Trustee may conclusively rely on its failure to receive such notice as reason to act as if no such event occurred; and

(g) the Trustee shall not be deemed to have knowledge of any Event of Default hereunder unless it shall have been notified in writing of such Event of Default by the Company or the holders of at least 10% in aggregate principal amount of the Notes.

None of the provisions contained in this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur personal financial liability in the performance of any of its duties or in the exercise of any of its rights or powers, if there is reasonable ground for believing that the repayment of such funds or adequate indemnity against such risk or liability is not reasonably assured to it.

SECTION 8.2. Reliance on Documents, Opinions, Etc. Except as otherwise provided in Section 8.01:

(a) the Trustee may rely and shall be protected in acting upon any resolution, certificate, statement, instrument, opinion, report, notice, request, consent, order, bond, debenture, note, coupon or other paper or document (whether in its original or facsimile form) believed by it in good faith to be genuine and to have been signed or presented by the proper party or parties;

(b) any request, direction, order or demand of the Company mentioned herein shall be sufficiently evidenced by an Officers' Certificate (unless other evidence in respect thereof be herein specifically prescribed); and any resolution of the Board of Directors may be evidenced to the Trustee by a copy thereof certified by the Secretary or an Assistant Secretary of the Company;

(c) the Trustee may consult with counsel of its own selection and any advice or Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken or omitted by it hereunder in good faith and in accordance with such advice or Opinion of Counsel;

(d) the Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request, order or direction of any of the Noteholders pursuant to the provisions of this Indenture, unless such Noteholders shall have offered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities which may be incurred therein or thereby;

(e) the Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture or other paper or document, but the Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit, and, if the Trustee shall determine to make such further inquiry or investigation, it shall be entitled to examine the books, records and premises of the Company, personally or by agent or attorney; and

(f) the Trustee may execute any of the trusts or powers hereunder or perform any duties hereunder either directly or by or through agents or attorneys and the Trustee shall not be responsible for any misconduct or negligence on the part of any agent or attorney appointed by it with due care hereunder.

SECTION 8.3. No Responsibility for Recitals, Etc. The recitals contained herein and in the Notes (except in the Trustee's certificate of authentication) shall be taken as the statements of the Company, and the Trustee assumes no responsibility for the correctness of the same. The Trustee makes no representations as to the validity or sufficiency of this Indenture or of the Notes. The Trustee shall not be accountable for the use or application by the Company of any Notes or the proceeds of any Notes authenticated and delivered by the Trustee in conformity with the provisions of this Indenture.

SECTION 8.4. Trustee, Paying Agents, Conversion Agents or Registrar May Own Notes. The Trustee, any paying agent, any conversion agent or Note registrar, in its individual or any other capacity, may become the owner or pledgee of Notes with the same rights it would have if it were not Trustee, paying agent, conversion agent or Note registrar.

SECTION 8.5. Monies to Be Held in Trust. Subject to the provisions of Section 13.04 and Section 4.02, all monies received by the Trustee shall, until used or applied as herein provided, be held in trust for the purposes for which they were received. Money held by the Trustee in trust hereunder need not be segregated from other funds except to the extent required by law. The Trustee shall be under no liability for interest on any money received by it hereunder

except as may be agreed in writing from time to time by the Company and the Trustee.

SECTION 8.6. Compensation and Expenses of Trustee. The Company covenants and agrees to pay to the Trustee from time to time, and the Trustee shall be entitled to, reasonable compensation for all services rendered by it hereunder in any capacity (which shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust) as mutually agreed to from time to time in writing between the Company and the Trustee, and the Company will pay or reimburse the Trustee upon its request for all reasonable expenses, disbursements and advances reasonably incurred or made by the Trustee in accordance with any of the provisions of this Indenture (including the reasonable compensation and the expenses and disbursements of its counsel and of all Persons not regularly in its employ) except any such expense, disbursement or advance as may arise from its negligence, willful misconduct, recklessness or bad faith. The Company also covenants to indemnify the Trustee (or any officer, director or employee of the Trustee), in any capacity under this Indenture and its agents and any authenticating agent for, and to hold them harmless against, any and all loss, liability, claim or expense incurred without negligence, willful misconduct, recklessness or bad faith on the part of the Trustee or such officers, directors, employees and agent or authenticating agent, as the case may be, and arising out of or in connection with the acceptance or administration of this trust or in any other capacity hereunder, including the costs and expenses of defending themselves against any claim of liability in the premises. The obligations of the Company under this Section 8.06 to compensate or indemnify the Trustee and to pay or reimburse the Trustee for expenses, disbursements and advances shall be secured by a lien prior to that of the Notes upon all property and funds held or collected by the Trustee as such, except funds held in trust for the benefit of the holders of particular Notes. The obligation of the Company under this Section shall survive the satisfaction and discharge of this Indenture.

When the Trustee and its agents and any authenticating agent incur expenses or render services after an Event of Default specified in Section 7.01(e) or 7.01(f) with respect to the Company occurs, the expenses and the compensation for the services are intended to constitute expenses of administration under any bankruptcy, insolvency or similar laws.

SECTION 8.7. Officers' Certificate as Evidence. Except as otherwise provided in Section 8.01, whenever in the administration of the provisions of this Indenture the Trustee shall deem it necessary or desirable that a matter be proved or established prior to taking or omitting any action hereunder, such matter (unless other evidence in respect thereof be herein specifically prescribed) may, in the absence of bad faith or willful misconduct on the part of the Trustee, be deemed to

be conclusively proved and established by an Officers' Certificate delivered to the Trustee.

SECTION 8.8. Conflicting Interests of Trustee. If the Trustee has or shall acquire a conflicting interest within the meaning of the Trust Indenture Act, the Trustee shall either eliminate such interest or resign, to the extent and in the manner provided by, and subject to the provisions of, the Trust Indenture Act and this Indenture.

SECTION 8.9. Eligibility of Trustee. There shall at all times be a Trustee hereunder which shall be a Person that is eligible pursuant to the Trust Indenture Act to act as such and has a combined capital and surplus of at least \$50,000,000 (or if such Person is a member of a bank holding company system, its bank holding company shall have a combined capital and surplus of at least \$50,000,000). If such Person publishes reports of condition at least annually, pursuant to law or to the requirements of any supervising or examining authority, then for the purposes of this Section the combined capital and surplus of such Person shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. If at any time the Trustee shall cease to be eligible in accordance with the provisions of this Section 8.09, it shall resign immediately in the manner and with the effect hereinafter specified in this Article.

SECTION 8.10. Resignation or Removal of Trustee.

(a) The Trustee may at any time resign by giving written notice of such resignation to the Company and to the holders of Notes. Upon receiving such notice of resignation, the Company shall promptly appoint a successor trustee by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the resigning Trustee and one copy to the successor trustee. If no successor trustee shall have been so appointed and have accepted appointment sixty (60) days after the mailing of such notice of resignation to the Noteholders, the resigning Trustee may, upon ten (10) business days' notice to the Company and the Noteholders, appoint a successor identified in such notice or may petition, at the expense of the Company, any court of competent jurisdiction for the appointment of a successor trustee, or, if any Noteholder who has been a bona fide holder of a Note or Notes for at least six (6) months may, subject to the provisions of Section 7.09, on behalf of himself and all others similarly situated, petition any such court for the appointment of a successor trustee. Such court may thereupon, after such notice, if any, as it may deem proper and prescribe, appoint a successor trustee.

(b) In case at any time any of the following shall occur:

(i) the Trustee shall fail to comply with Section 8.08 after written request therefor by the Company or by any Noteholder who has been a bona fide holder of a Note or Notes for at least six (6) months; or

(ii) the Trustee shall cease to be eligible in accordance with the provisions of Section 8.09 and shall fail to resign after written request therefor by the Company or by any such Noteholder; or

(iii) the Trustee shall become incapable of acting, or shall be adjudged a bankrupt or insolvent, or a receiver of the Trustee or of its property shall be appointed, or any public officer shall take charge or control of the Trustee or of its property or affairs for the purpose of rehabilitation, conservation or liquidation;

then, in any such case, the Company may remove the Trustee and appoint a successor trustee by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the Trustee so removed and one copy to the successor trustee, or, subject to the provisions of Section 7.09, any Noteholder who has been a bona fide holder of a Note or Notes for at least six (6) months may, on behalf of himself and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor trustee; provided that if no successor Trustee shall have been appointed and have accepted appointment sixty (60) days after either the Company or the Noteholders has removed the Trustee, the Trustee so removed may petition, at the expense of the Company, any court of competent jurisdiction for an appointment of a successor trustee. Such court may thereupon, after such notice, if any, as it may deem proper and prescribe, remove the Trustee and appoint a successor trustee.

(c) The holders of a majority in aggregate principal amount of the Notes at the time outstanding may at any time remove the Trustee and nominate a successor trustee which shall be deemed appointed as successor trustee unless, within ten (10) days after notice to the Company of such nomination, the Company objects thereto, in which case the Trustee so removed or any Noteholder, or if such Trustee so removed or any Noteholder fails to act, the Company, upon the terms and conditions and otherwise as in Section 8.10(a) provided, may petition any court of competent jurisdiction for an appointment of a successor trustee.

(d) Any resignation or removal of the Trustee and appointment of a successor trustee pursuant to any of the provisions of this Section 8.10 shall become effective upon acceptance of appointment by the successor trustee as provided in Section 8.11.

SECTION 8.11. Acceptance by Successor Trustee. Any successor trustee appointed as provided in Section 8.10 shall execute, acknowledge and deliver to the Company and to its predecessor trustee an instrument accepting such appointment hereunder, and thereupon the resignation or removal of the predecessor trustee shall become effective and such successor trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, duties and obligations of its predecessor hereunder, with like effect as if originally named as trustee herein; but, nevertheless, on the written request of the Company or of the successor trustee, the trustee ceasing to act shall, upon payment of any amount then due it pursuant to the provisions of Section 8.06, execute and deliver an instrument transferring to such successor trustee all the rights and powers of the trustee so ceasing to act. Upon request of any such successor trustee, the Company shall execute any and all instruments in writing for more fully and certainly vesting in and confirming to such successor trustee all such rights and powers. Any trustee ceasing to act shall, nevertheless, retain a lien upon all property and funds held or collected by such trustee as such, except for funds held in trust for the benefit of holders of particular Notes, to secure any amounts then due it pursuant to the provisions of Section 8.06.

No successor trustee shall accept appointment as provided in this Section 8.11 unless, at the time of such acceptance, such successor trustee shall be qualified under the provisions of Section 8.08 and be eligible under the provisions of Section 8.09.

Upon acceptance of appointment by a successor trustee as provided in this Section 8.11, the Company (or the former trustee, at the written direction of the Company) shall mail or cause to be mailed notice of the succession of such trustee hereunder to the holders of Notes at their addresses as they shall appear on the Note register. If the Company fails to mail such notice within ten (10) days after acceptance of appointment by the successor trustee, the successor trustee shall cause such notice to be mailed at the expense of the Company.

SECTION 8.12. Succession by Merger, Etc. Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to all or substantially all of the corporate trust business of the Trustee (including any trust created by this Indenture), shall be the successor to the Trustee hereunder without the execution or filing of any paper or any further act on the part of any of the parties hereto, provided that in the case of any corporation succeeding to all or substantially all of the corporate trust business of the Trustee, such corporation

shall be qualified under the provisions of Section 8.08 and eligible under the provisions of Section 8.09.

In case at the time such successor to the Trustee shall succeed to the trusts created by this Indenture, any of the Notes shall have been authenticated but not delivered, any such successor to the Trustee may adopt the certificate of authentication of any predecessor trustee or authenticating agent appointed by such predecessor trustee, and deliver such Notes so authenticated; and in case at that time any of the Notes shall not have been authenticated, any successor to the Trustee or any authenticating agent appointed by such successor trustee may authenticate such Notes in the name of the successor trustee; and in all such cases such certificates shall have the full force that is provided in the Notes or in this Indenture; provided that the right to adopt the certificate of authentication of any predecessor Trustee or authenticate Notes in the name of any predecessor Trustee shall apply only to its successor or successors by merger, conversion or consolidation.

SECTION 8.13. Preferential Collection of Claims. If and when the Trustee shall be or become a creditor of the Company (or any other obligor upon the Notes), the Trustee shall be subject to the provisions of the Trust Indenture Act regarding the collection of the claims against the Company (or any such other obligor).

SECTION 8.14. Trustee's Application for Instructions from the Company. Any application by the Trustee for written instructions from the Company (other than with regard to any action proposed to be taken or omitted to be taken by the Trustee that affects the rights of the holders of the Notes or holders of Senior Indebtedness under this Indenture, including, without limitation, under Article 4 hereof) may, at the option of the Trustee, set forth in writing any action proposed to be taken or omitted by the Trustee under this Indenture and the date on and/or after which such action shall be taken or such omission shall be effective. The Trustee shall not be liable for any action taken by, or omission of, the Trustee in accordance with a proposal included in such application on or after the date specified in such application (which date shall not be less than three (3) Business Days after the date any officer of the Company actually receives such application, unless any such officer shall have consented in writing to any earlier date) unless prior to taking any such action (or the effective date in the case of an omission), the Trustee shall have received written instructions in response to such application specifying the action to be taken or omitted.

ARTICLE 9

THE NOTEHOLDERS

SECTION 9.1. Action by Noteholders. Whenever in this Indenture it is provided that the holders of a specified percentage in aggregate principal amount of the Notes may take any action (including the making of any demand or request, the giving of any notice, consent or waiver or the taking of any other action), the fact that at the time of taking any such action, the holders of such specified percentage have joined therein may be evidenced (a) by any instrument or any number of instruments of similar tenor executed by Noteholders in person or by agent or proxy appointed in writing, or (b) by the record of the holders of Notes voting in favor thereof at any meeting of Noteholders duly called and held in accordance with the provisions of Article 10, or (c) by a combination of such instrument or instruments and any such record of such a meeting of Noteholders. Whenever the Company or the Trustee solicits the taking of any action by the holders of the Notes, the Company or the Trustee may fix in advance of such solicitation, a date as the record date for determining holders entitled to take such action. The record date shall be not more than fifteen (15) days prior to the date of commencement of solicitation of such action.

SECTION 9.2. Proof of Execution by Noteholders. Subject to the provisions of Sections 8.01, 8.02 and 10.05, proof of the execution of any instrument by a Noteholder or its agent or proxy shall be sufficient if made in accordance with such reasonable rules and regulations as may be prescribed by the Trustee or in such manner as shall be satisfactory to the Trustee. The holding of Notes shall be proved by the registry of such Notes or by a certificate of the Note registrar.

The record of any Noteholders' meeting shall be proved in the manner provided in Section 10.06.

SECTION 9.3. Who Are Deemed Absolute Owners. The Company, the Trustee, any paying agent, any conversion agent and any Note registrar may deem the Person in whose name such Note shall be registered upon the Note register to be, and may treat it as, the absolute owner of such Note (whether or not such Note shall be overdue and notwithstanding any notation of ownership or other writing thereon made by any Person other than the Company or any Note registrar) for the purpose of receiving payment of or on account of the principal of, premium, if any, and interest on such Note, for conversion of such Note and for all other purposes; and neither the Company nor the Trustee nor any paying agent nor any conversion agent nor any Note registrar shall be affected by any notice to the contrary. All such payments so made to any holder for the time being, or upon his order, shall be valid, and, to the extent of the sum or sums so paid, effectual to satisfy and discharge the liability for monies payable upon any such Note.

SECTION 9.4. Company-owned Notes Disregarded. In determining whether the holders of the requisite aggregate principal amount of Notes have concurred in any direction, consent, waiver or other action under this Indenture, Notes which are owned by the Company or any other obligor on the Notes or any Affiliate of the Company or any other obligor on the Notes shall be disregarded and deemed not to be outstanding for the purpose of any such determination; provided that, for the purposes of determining whether the Trustee shall be protected in relying on any such direction, consent, waiver or other action, only Notes which a Responsible Officer knows are so owned shall be so disregarded. Notes so owned which have been pledged in good faith may be regarded as outstanding for the purposes of this Section 9.04 if the pledgee shall establish to the satisfaction of the Trustee the pledgee's right to vote such Notes and that the pledgee is not the Company, any other obligor on the Notes or any Affiliate of the Company or any such other obligor. In the case of a dispute as to such right, any decision by the Trustee taken upon the advice of counsel shall be full protection to the Trustee. Upon request of the Trustee, the Company shall furnish to the Trustee promptly an Officers' Certificate listing and identifying all Notes, if any, known by the Company to be owned or held by or for the account of any of the above described Persons, and, subject to Section 8.01, the Trustee shall be entitled to accept such Officers' Certificate as conclusive evidence of the facts therein set forth and of the fact that all Notes not listed therein are outstanding for the purpose of any such determination.

SECTION 9.5. Revocation of Consents, Future Holders Bound. At any time prior to (but not after) the evidencing to the Trustee, as provided in Section 9.01, of the taking of any action by the holders of the percentage in aggregate principal amount of the Notes specified in this Indenture in connection with such action, any holder of a Note which is shown by the evidence to be included in the Notes the holders of which have consented to such action may, by filing written notice with the Trustee at its Corporate Trust Office and upon proof of holding as provided in Section 9.02, revoke such action so far as concerns such Note. Except as aforesaid, any such action taken by the holder of any Note shall be conclusive and binding upon such holder and upon all future holders and owners of such Note and of any Notes issued in exchange or substitution therefor, irrespective of whether any notation in regard thereto is made upon such Note or any Note issued in exchange or substitution therefor.

ARTICLE 10

MEETINGS OF NOTEHOLDERS

SECTION 10.1. Purpose of Meetings. A meeting of Noteholders may be called at any time and from time to time pursuant to the provisions of this Article 10 for any of the following purposes:

(1) to give any notice to the Company or to the Trustee or to give any directions to the Trustee permitted under this Indenture, or to consent to the waiving of any default or Event of Default hereunder and its consequences, or to take any other action authorized to be taken by Noteholders pursuant to any of the provisions of Article 7;

(2) to remove the Trustee and nominate a successor trustee pursuant to the provisions of Article 8;

(3) to consent to the execution of an indenture or indentures supplemental hereto pursuant to the provisions of Section 11.02; or

(4) to take any other action authorized to be taken by or on behalf of the holders of any specified aggregate principal amount of the Notes under any other provision of this Indenture or under applicable law.

SECTION 10.2. Call of Meetings by Trustee. The Trustee may at any time call a meeting of Noteholders to take any action specified in Section 10.01, to be held at such time and at such place as the Trustee shall determine. Notice of every meeting of the Noteholders, setting forth the time and the place of such meeting and in general terms the action proposed to be taken at such meeting and the establishment of any record date pursuant to Section 9.01, shall be mailed to holders of Notes at their addresses as they shall appear on the Note register. Such notice shall also be mailed to the Company. Such notices shall be mailed not less than twenty (20) nor more than ninety (90) days prior to the date fixed for the meeting.

Any meeting of Noteholders shall be valid without notice if the holders of all Notes then outstanding are present in person or by proxy or if notice is waived before or after the meeting by the holders of all Notes outstanding, and if the Company and the Trustee are either present by duly authorized representatives or have, before or after the meeting, waived notice.

SECTION 10.3. Call of Meetings by Company or Noteholders. In case at any time the Company, pursuant to a resolution of its Board of Directors, or the holders of at least ten percent (10%) in aggregate principal amount of the Notes then outstanding, shall have requested the Trustee to call a meeting of Noteholders, by written request setting forth in reasonable detail the action proposed to be taken at the meeting, and the Trustee shall not have mailed the

notice of such meeting within twenty (20) days after receipt of such request, then the Company or such Noteholders may determine the time and the place for such meeting and may call such meeting to take any action authorized in Section 10.01, by mailing notice thereof as provided in Section 10.02.

SECTION 10.4. Qualifications for Voting. To be entitled to vote at any meeting of Noteholders a person shall (a) be a holder of one or more Notes on the record date pertaining to such meeting or (b) be a person appointed by an instrument in writing as proxy by a holder of one or more Notes on the record date pertaining to such meeting. The only persons who shall be entitled to be present or to speak at any meeting of Noteholders shall be the persons entitled to vote at such meeting and their counsel and any representatives of the Trustee and its counsel and any representatives of the Company and its counsel.

SECTION 10.5. Regulations. Notwithstanding any other provisions of this Indenture, the Trustee may make such reasonable regulations as it may deem advisable for any meeting of Noteholders, in regard to proof of the holding of Notes and of the appointment of proxies, and in regard to the appointment and duties of inspectors of votes, the submission and examination of proxies, certificates and other evidence of the right to vote, and such other matters concerning the conduct of the meeting as it shall think fit.

The Trustee shall, by an instrument in writing, appoint a temporary chairman of the meeting, unless the meeting shall have been called by the Company or by Noteholders as provided in Section 10.03, in which case the Company or the Noteholders calling the meeting, as the case may be, shall in like manner appoint a temporary chairman. A permanent chairman and a permanent secretary of the meeting shall be elected by vote of the holders of a majority in principal amount of the Notes represented at the meeting and entitled to vote at the meeting.

Subject to the provisions of Section 9.04, at any meeting each Noteholder or proxyholder shall be entitled to one vote for each \$1,000 principal amount of Notes held or represented by him; provided that no vote shall be cast or counted at any meeting in respect of any Note challenged as not outstanding and ruled by the chairman of the meeting to be not outstanding. The chairman of the meeting shall have no right to vote other than by virtue of Notes held by him or instruments in writing as aforesaid duly designating him as the proxy to vote on behalf of other Noteholders. Any meeting of Noteholders duly called pursuant to the provisions of Section 10.02 or 10.03 may be adjourned from time to time by the holders of a majority of the aggregate principal amount of Notes represented at the meeting, whether or not constituting a quorum, and the meeting may be held as so adjourned without further notice.

SECTION 10.6. Voting. The vote upon any resolution submitted to any meeting of Noteholders shall be by written ballot on which shall be subscribed the signatures of the holders of Notes or of their representatives by proxy and the outstanding principal amount of the Notes held or represented by them. The permanent chairman of the meeting shall appoint two inspectors of votes who shall count all votes cast at the meeting for or against any resolution and who shall make and file with the secretary of the meeting their verified written reports in duplicate of all votes cast at the meeting. A record in duplicate of the proceedings of each meeting of Noteholders shall be prepared by the secretary of the meeting and there shall be attached to said record the original reports of the inspectors of votes on any vote by ballot taken thereat and affidavits by one or more persons having knowledge of the facts setting forth a copy of the notice of the meeting and showing that said notice was mailed as provided in Section 10.02. The record shall show the principal amount of the Notes voting in favor of or against any resolution. The record shall be signed and verified by the affidavits of the permanent chairman and secretary of the meeting and one of the duplicates shall be delivered to the Company and the other to the Trustee to be preserved by the Trustee, the latter to have attached thereto the ballots voted at the meeting.

Any record so signed and verified shall be conclusive evidence of the matters therein stated.

SECTION 10.7. No Delay of Rights by Meeting. Nothing contained in this Article 10 shall be deemed or construed to authorize or permit, by reason of any call of a meeting of Noteholders or any rights expressly or impliedly conferred hereunder to make such call, any hindrance or delay in the exercise of any right or rights conferred upon or reserved to the Trustee or to the Noteholders under any of the provisions of this Indenture or of the Notes.

ARTICLE 11

SUPPLEMENTAL INDENTURES

SECTION 11.1. Supplemental Indentures Without Consent of Noteholders. The Company, when authorized by the resolutions of the Board of Directors, and the Trustee may, from time to time, and at any time enter into an indenture or indentures supplemental hereto for one or more of the following purposes:

(a) make provision with respect to the conversion rights of the holders of Notes pursuant to the requirements of Section 15.06 and the redemption obligations of the Company pursuant to the requirements of Section 3.05(e);

(b) subject to Article 4, to convey, transfer, assign, mortgage or pledge to the Trustee as security for the Notes, any property or assets;

(c) to evidence the succession of another Person to the Company, or successive successions, and the assumption by the successor Person of the covenants, agreements and obligations of the Company pursuant to Article 12;

(d) to add to the covenants of the Company such further covenants, restrictions or conditions as the Board of Directors and the Trustee shall consider to be for the benefit of the holders of Notes, and to make the occurrence, or the occurrence and continuance, of a default in any such additional covenants, restrictions or conditions a default or an Event of Default permitting the enforcement of all or any of the several remedies provided in this Indenture as herein set forth; provided that in respect of any such additional covenant, restriction or condition, such supplemental indenture may provide for a particular period of grace after default (which period may be shorter or longer than that allowed in the case of other defaults) or may provide for an immediate enforcement upon such default or may limit the remedies available to the Trustee upon such default;

(e) to provide for the issuance under this Indenture of Notes in coupon form (including Notes registrable as to principal only) and to provide for exchangeability of such Notes with the Notes issued hereunder in fully registered form and to make all appropriate changes for such purpose;

(f) to cure any ambiguity or to correct or supplement any provision contained herein or in any supplemental indenture that may be defective or inconsistent with any other provision contained herein or in any supplemental indenture, or to make such other provisions in regard to matters or questions arising under this Indenture that shall not materially adversely affect the interests of the holders of the Notes;

(g) to evidence and provide for the acceptance of appointment hereunder by a successor Trustee with respect to the Notes; or

(h) to modify, eliminate or add to the provisions of this Indenture to such extent as shall be necessary to effect the qualifications of this Indenture under the Trust Indenture Act, or under any similar federal statute hereafter enacted.

Upon the written request of the Company, accompanied by a copy of the resolutions of the Board of Directors certified by its Secretary or Assistant Secretary authorizing the execution of any supplemental indenture, the Trustee is

hereby authorized to join with the Company in the execution of any such supplemental indenture, to make any further appropriate agreements and stipulations that may be therein contained and to accept the conveyance, transfer and assignment of any property thereunder, but the Trustee shall not be obligated to, but may in its discretion, enter into any supplemental indenture that affects the Trustee's own rights, duties or immunities under this Indenture or otherwise.

Any supplemental indenture authorized by the provisions of this Section 11.01 may be executed by the Company and the Trustee without the consent of the holders of any of the Notes at the time outstanding, notwithstanding any of the provisions of Section 11.02.

Notwithstanding any other provision of this Indenture or the Notes, the Registration Rights Agreement and the obligation to pay Liquidated Damages thereunder may be amended, modified or waived in accordance with the provisions of the Registration Rights Agreement.

SECTION 11.2. Supplemental Indenture with Consent of Noteholders . With the consent (evidenced as provided in Article 9) of the holders of not less than a majority in aggregate principal amount of the Notes at the time outstanding, the Company, when authorized by the resolutions of the Board of Directors, and the Trustee may, from time to time and at any time, enter into an indenture or indentures supplemental hereto for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Indenture or any supplemental indenture or of modifying in any manner the rights of the holders of the Notes; provided that no such supplemental indenture shall (i) extend the fixed maturity of any Note, or reduce the rate or extend the time for payment of interest thereon, or reduce the principal amount thereof or premium, if any, thereon, or reduce any amount payable on redemption or repurchase thereof, or impair the right of any Noteholder to institute suit for the payment thereof, or make the principal thereof or interest or premium, if any, thereon payable in any coin or currency other than that provided in the Notes, or modify the provisions of this Indenture with respect to the subordination of the Notes in a manner adverse to the Noteholders in any material respect, or change the obligation of the Company to redeem any Note upon the happening of a Fundamental Change in a manner adverse to the holder of Notes, or impair the right to convert the Notes into Common Stock subject to the terms set forth herein, including Section 15.06, in each case, without the consent of the holder of each Note so affected, or (ii) reduce the aforesaid percentage of Notes, the holders of which are required to consent to any such supplemental indenture, modify any of the provisions of this Indenture relating to supplemental indentures with the consent of holders or the provisions relating to waiver of past defaults (except to increase any percentage contained in such provisions or to provide that other provisions of this Indenture

cannot be modified or waived without the consent of the holders of all Notes then outstanding or each Note affected thereby), reduce the quorum or voting requirements of this Indenture or change any obligation of the Company to maintain an office or agency in the places and for the purposes specified in this Indenture, without the consent of the holders of all Notes then outstanding.

Upon the written request of the Company, accompanied by a copy of the resolutions of the Board of Directors certified by its Secretary or Assistant Secretary authorizing the execution of any such supplemental indenture, and upon the filing with the Trustee of evidence of the consent of Noteholders as aforesaid, the Trustee shall join with the Company in the execution of such supplemental indenture unless such supplemental indenture affects the Trustee's own rights, duties or immunities under this Indenture or otherwise, in which case the Trustee may in its discretion, but shall not be obligated to, enter into such supplemental indenture.

It shall not be necessary for the consent of the Noteholders under this Section 11.02 to approve the particular form of any proposed supplemental indenture, but it shall be sufficient if such consent shall approve the substance thereof.

SECTION 11.3. Effect of Supplemental Indenture. Any supplemental indenture executed pursuant to the provisions of this Article 11 shall comply with the Trust Indenture Act, as then in effect, provided that this Section 11.03 shall not require such supplemental indenture or the Trustee to be qualified under the Trust Indenture Act prior to the time such qualification is in fact required under the terms of the Trust Indenture Act or the Indenture has been qualified under the Trust Indenture Act, nor shall it constitute any admission or acknowledgment by any party to such supplemental indenture that any such qualification is required prior to the time such qualification is in fact required under the terms of the Trust Indenture Act or the Indenture has been qualified under the Trust Indenture Act. Upon the execution of any supplemental indenture pursuant to the provisions of this Article 11, this Indenture shall be and be deemed to be modified and amended in accordance therewith and the respective rights, limitation of rights, obligations, duties and immunities under this Indenture of the Trustee, the Company and the holders of Notes shall thereafter be determined, exercised and enforced hereunder, subject in all respects to such modifications and amendments and all the terms and conditions of any such supplemental indenture shall be and be deemed to be part of the terms and conditions of this Indenture for any and all purposes.

SECTION 11.4. Notation on Notes. Notes authenticated and delivered after the execution of any supplemental indenture pursuant to the provisions of this Article 11 may bear a notation in form approved by the Trustee as to any matter

provided for in such supplemental indenture. If the Company or the Trustee shall so determine, new Notes so modified as to conform, in the opinion of the Trustee and the Board of Directors, to any modification of this Indenture contained in any such supplemental indenture may, at the Company's expense, be prepared and executed by the Company, authenticated by the Trustee (or an authenticating agent duly appointed by the Trustee pursuant to Section 16.10) and delivered in exchange for the Notes then outstanding, upon surrender of such Notes then outstanding.

SECTION 11.5. Evidence of Compliance of Supplemental Indenture to be Furnished to Trustee. Prior to entering into any supplemental indenture, the Trustee shall receive an Officers' Certificate and an Opinion of Counsel as conclusive evidence that any supplemental indenture executed pursuant hereto complies with the requirements of this Article 11.

ARTICLE 12

CONSOLIDATION, MERGER, SALE, CONVEYANCE AND LEASE

SECTION 12.1. Company May Consolidate on Certain Terms. Subject to the provisions of Section 12.02, nothing contained in this Indenture or in any of the Notes shall prevent any consolidation or merger of the Company with or into any other Person or Persons (whether or not affiliated with the Company), or successive consolidations or mergers in which the Company or its successor or successors shall be a party or parties, or shall prevent any sale, conveyance or lease (or successive sales, conveyances or leases) of all or substantially all of the property of the Company, to any other Person (whether or not affiliated with the Company), authorized to acquire and operate the same and that shall be organized under the laws of (a) the United States of America, any state thereof or the District of Columbia or (b) if the merger, consolidation or other transaction would not impair the rights of holders, including without limitation result in adverse tax consequences to U.S. holders, any other country; provided that upon any such consolidation, merger, sale, conveyance or lease, the due and punctual payment of the principal of and premium, if any, and interest on all of the Notes, according to their tenor and the due and punctual performance and observance of all of the covenants and conditions of this Indenture to be performed by the Company, shall be expressly assumed, by supplemental indenture satisfactory in form to the Trustee, executed and delivered to the Trustee by the Person (if other than the Company) formed by such consolidation, or into which the Company shall have been merged, or by the Person that shall have acquired or leased such property,

and such supplemental indenture shall provide for the applicable conversion rights set forth in Section 15.06.

SECTION 12.2. Successor Corporation to Be Substituted. In case of any such consolidation, merger, sale, conveyance or lease and upon the assumption by the successor Person, by supplemental indenture, executed and delivered to the Trustee and satisfactory in form to the Trustee, of the due and punctual payment of the principal of and premium, if any, and interest on all of the Notes and the due and punctual performance of all of the covenants and conditions of this Indenture to be performed by the Company, such successor Person shall succeed to and be substituted for the Company, with the same effect as if it had been named herein as the party of this first part. Such successor Person thereupon may cause to be signed, and may issue either in its own name or in the name of Photronics, Inc. any or all of the Notes, issuable hereunder that theretofore shall not have been signed by the Company and delivered to the Trustee; and, upon the order of such successor Person instead of the Company and subject to all the terms, conditions and limitations in this Indenture prescribed, the Trustee shall authenticate and shall deliver, or cause to be authenticated and delivered, any Notes that previously shall have been signed and delivered by the officers of the Company to the Trustee for authentication, and any Notes that such successor Person thereafter shall cause to be signed and delivered to the Trustee for that purpose. All the Notes so issued shall in all respects have the same legal rank and benefit under this Indenture as the Notes theretofore or thereafter issued in accordance with the terms of this Indenture as though all of such Notes had been issued at the date of the execution hereof. In the event of any such consolidation, merger, sale, conveyance or lease, the Person named as the "Company" in the first paragraph of this Indenture or any successor that shall thereafter have become such in the manner prescribed in this Article 12 may be dissolved, wound up and liquidated at any time thereafter and such Person shall be released from its liabilities as obligor and maker of the Notes and from its obligations under this Indenture.

In case of any such consolidation, merger, sale, conveyance or lease, such changes in phraseology and form (but not in substance) may be made in the Notes thereafter to be issued as may be appropriate.

SECTION 12.3. Opinion of Counsel to Be Given Trustee. The Trustee shall receive an Officers' Certificate and an Opinion of Counsel as conclusive evidence that any such consolidation, merger, sale, conveyance or lease and any such assumption complies with the provisions of this Article 12.

ARTICLE 13

SATISFACTION AND DISCHARGE OF INDENTURE

SECTION 13.1. Discharge of Indenture. When (a) the Company shall deliver to the Trustee for cancellation all Notes theretofore authenticated (other than any Notes that have been destroyed, lost or stolen and in lieu of or in substitution for which other Notes shall have been authenticated and delivered) and not theretofore canceled, or (b) all the Notes not theretofore canceled or delivered to the Trustee for cancellation shall have become due and payable, or are by their terms to become due and payable within one year or are to be called for redemption within one year under arrangements satisfactory to the Trustee for the giving of notice of redemption, and the Company shall deposit with the Trustee, in trust, funds sufficient to pay at maturity or upon redemption of all of the Notes (other than any Notes that shall have been mutilated, destroyed, lost or stolen and in lieu of or in substitution for which other Notes shall have been authenticated and delivered) not theretofore canceled or delivered to the Trustee for cancellation, including principal and premium, if any, and interest due or to become due to such date of maturity or redemption date, as the case may be, accompanied by a verification report, as to the sufficiency of the deposited amount, from an independent certified accountant or other financial professional satisfactory to the Trustee, and if the Company shall also pay or cause to be paid all other sums payable hereunder by the Company, then this Indenture shall cease to be of further effect (except as to (i) remaining rights of registration of transfer, substitution and exchange and conversion of Notes, (ii) rights hereunder of Noteholders to receive payments of principal of and premium, if any, and interest on, the Notes and the other rights, duties and obligations of Noteholders, as beneficiaries hereof with respect to the amounts, if any, so deposited with the Trustee and (iii) the rights, obligations and immunities of the Trustee hereunder), and the Trustee, on written demand of the Company accompanied by an Officers' Certificate and an Opinion of Counsel as required by Section 16.04 and at the cost and expense of the Company, shall execute proper instruments acknowledging satisfaction of and discharging this Indenture; the Company, however, hereby agrees to reimburse the Trustee for any costs or expenses thereafter reasonably and properly incurred by the Trustee and to compensate the Trustee for any services thereafter reasonably and properly rendered by the Trustee in connection with this Indenture or the Notes.

SECTION 13.2. Deposited Monies to Be Held in Trust by Trustee . Subject to Section 13.04, all monies deposited with the Trustee pursuant to Section 13.01, provided such deposit was not in violation of Article 4, shall be held in trust for the sole benefit of the Noteholders and not to be subject to the subordination provisions of Article 4, and such monies shall be applied by the Trustee to the payment, either directly or through any paying agent (including the Company if

acting as its own paying agent), to the holders of the particular Notes for the payment or redemption of which such monies have been deposited with the Trustee, of all sums due and to become due thereon for principal and interest and premium, if any.

SECTION 13.3. Paying Agent to Repay Monies Held. Upon the satisfaction and discharge of this Indenture, all monies then held by any paying agent of the Notes (other than the Trustee) shall, upon written request of the Company, be repaid to it or paid to the Trustee, and thereupon such paying agent shall be released from all further liability with respect to such monies.

SECTION 13.4. Return of Unclaimed Monies. Subject to the requirements of applicable law, any monies deposited with or paid to the Trustee for payment of the principal of, premium, if any, or interest on Notes and not applied but remaining unclaimed by the holders of Notes for two years after the date upon which the principal of, premium, if any, or interest on such Notes, as the case may be, shall have become due and payable, shall be repaid to the Company by the Trustee on demand and all liability of the Trustee shall thereupon cease with respect to such monies; and the holder of any of the Notes shall thereafter look only to the Company for any payment that such holder may be entitled to collect unless an applicable abandoned property law designates another Person.

SECTION 13.5. Reinstatement. If the Trustee or the paying agent is unable to apply any money in accordance with Section 13.02 by reason of any order or judgment of any court or governmental authority enjoining, restraining or otherwise prohibiting such application, the Company's obligations under this Indenture and the Notes shall be revived and reinstated as though no deposit had occurred pursuant to Section 13.01 until such time as the Trustee or the paying agent is permitted to apply all such money in accordance with Section 13.02; provided that if the Company makes any payment of interest on or principal of any Note following the reinstatement of its obligations, the Company shall be subrogated to the rights of the holders of such Notes to receive such payment from the money held by the Trustee or paying agent.

ARTICLE 14

IMMUNITY OF INCORPORATORS, STOCKHOLDERS, OFFICERS AND DIRECTORS

SECTION 14.1. Indenture and Notes Solely Corporate Obligations. No recourse for the payment of the principal of or premium, if any, or interest on any Note, or for any claim based thereon or otherwise in respect thereof, and no

recourse under or upon any obligation, covenant or agreement of the Company in this Indenture or in any supplemental indenture or in any Note, or because of the creation of any indebtedness represented thereby, shall be had against any incorporator, stockholder, employee, agent, officer, director or subsidiary, as such, past, present or future, of the Company or of any successor corporation, either directly or through the Company or any successor corporation, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise; it being expressly understood that all such liability is hereby expressly waived and released as a condition of, and as a consideration for, the execution of this Indenture and the issue of the Notes.

ARTICLE 15

CONVERSION OF NOTES

SECTION 15.1. Right to Convert. Subject to and upon compliance with the provisions of this Indenture, including, without limitation, Article 4, the holder of any Note shall have the right, at its option, at any time after the original issuance of the Notes hereunder through the close of business on the final maturity date of the Notes (except that, with respect to any Note or portion of a Note that shall be called for redemption, such right shall terminate, except as provided in Section 15.02, Section 3.02 or Section 3.04, at the close of business on the Business Day next preceding the date fixed for redemption of such Note or portion of a Note unless the Company shall default in payment due upon redemption thereof) to convert the principal amount of the Note, or any portion of such principal amount which is an integral multiple of \$1,000, into fully paid and non-assessable shares of Common Stock (as such shares shall then be constituted) at the Conversion Rate in effect at such time, by surrender of the Note so to be converted in whole or in part in the manner provided, together with any required funds, in Section 15.02. A Note in respect of which a holder is exercising its option to require redemption upon a Fundamental Change pursuant to Section 3.05(a) may be converted only if such holder withdraws its election to exercise in accordance with Section 3.05(b). A holder of Notes is not entitled to any rights of a holder of Common Stock until such holder has converted his Notes to Common Stock, and only to the extent such Notes are deemed to have been converted to Common Stock under this Article 15.

SECTION 15.2. Exercise of Conversion Privilege; Issuance of Common Stock on Conversion, No Adjustment for Interest or Dividends. In order to exercise the conversion privilege with respect to any Note in certificated form, the holder of any such Note to be converted in whole or in part shall surrender such

Note, duly endorsed, at an office or agency maintained by the Company for such purpose pursuant to Section 5.02, accompanied by the funds, if any, required by the penultimate paragraph of this Section 15.02, and shall give written notice of conversion in the form provided on the Notes (or such other notice which is acceptable to the Company) to the office or agency that the holder elects to convert such Note or the portion thereof specified in said notice. Such notice shall also state the name or names (with address or addresses) in which the certificate or certificates for shares of Common Stock which shall be issuable on such conversion shall be issued, and shall be accompanied by transfer taxes, if required pursuant to Section 15.07. Each such Note surrendered for conversion shall, unless the shares issuable on conversion are to be issued in the same name as the registration of such Note, be duly endorsed by, or be accompanied by instruments of transfer in form satisfactory to the Company duly executed by, the holder or his duly authorized attorney.

In order to exercise the conversion privilege with respect to any interest in a Global Note, the beneficial holder must complete, or cause to be completed, the appropriate instruction form for conversion pursuant to the Depositary's book-entry conversion program, deliver, or cause to be delivered, by book-entry delivery an interest in such Global Note, furnish appropriate endorsements and transfer documents if required by the Company or the Trustee or conversion agent, and pay the funds, if any, required by this Section 15.02 and any transfer taxes if required pursuant to Section 15.07.

As promptly as practicable after satisfaction of the requirements for conversion set forth above, subject to compliance with any restrictions on transfer if shares issuable on conversion are to be issued in a name other than that of the Noteholder (as if such transfer were a transfer of the Note or Notes (or portion thereof) so converted), the Company shall issue and shall deliver to such Noteholder at the office or agency maintained by the Company for such purpose pursuant to Section 5.02, a certificate or certificates for the number of full shares of Common Stock issuable upon the conversion of such Note or portion thereof as determined by the Company in accordance with the provisions of this Article 15 and a check or cash in respect of any fractional interest in respect of a share of Common Stock arising upon such conversion, calculated by the Company as provided in Section 15.03. In case any Note of a denomination greater than \$1,000 shall be surrendered for partial conversion, and subject to Section 2.03, the Company shall execute and the Trustee shall authenticate and deliver to the holder of the Note so surrendered, without charge to him, a new Note or Notes in authorized denominations in an aggregate principal amount equal to the unconverted portion of the surrendered Note.

Each conversion shall be deemed to have been effected as to any such Note (or portion thereof) on the date on which the requirements set forth above in this Section 15.02 have been satisfied as to such Note (or portion thereof), and the Person in whose name any certificate or certificates for shares of Common Stock shall be issuable upon such conversion shall be deemed to have become on said date the holder of record of the shares represented thereby; provided that any such surrender on any date when the stock transfer books of the Company shall be closed shall constitute the Person in whose name the certificates are to be issued as the record holder thereof for all purposes on the next succeeding day on which such stock transfer books are open, but such conversion shall be at the Conversion Rate in effect on the date upon which such Note shall be surrendered.

Any Note or portion thereof surrendered for conversion during the period from the close of business on the record date for any interest payment date to the close of business on the Business Day preceding the following interest payment date that has not been called for redemption during such period shall be accompanied by payment, in immediately available funds or other funds acceptable to the Company, of an amount equal to the interest otherwise payable on such interest payment date on the principal amount being converted; provided that no such payment need be made if there shall exist at the time of conversion a default in the payment of interest on the Notes. Except as provided above in this Section 15.01, no payment or other adjustment shall be made for interest accrued on any Note converted or for dividends on any shares issued upon the conversion of such Note as provided in this Article.

Upon the conversion of an interest in a Global Note, the Trustee (or other conversion agent appointed by the Company), or the Custodian at the direction of the Trustee (or other conversion agent appointed by the Company), shall make a notation on such Global Note as to the reduction in the principal amount represented thereby. The Company shall notify the Trustee in writing of any conversions of Notes effected through any conversion agent other than the Trustee.

SECTION 15.3. Cash Payments in Lieu of Fractional Shares. No fractional shares of Common Stock or scrip representing fractional shares shall be issued upon conversion of Notes. If more than one Note shall be surrendered for conversion at one time by the same holder, the number of full shares that shall be issuable upon conversion shall be computed on the basis of the aggregate principal amount of the Notes (or specified portions thereof to the extent permitted hereby) so surrendered. If any fractional share of stock would be issuable upon the conversion of any Note or Notes, the Company shall make an adjustment and payment therefor in cash at the current market price thereof to the holder of Notes. The current market price of a share of Common Stock shall be

the Closing Price on the last Business Day immediately preceding the day on which the Notes (or specified portions thereof) are deemed to have been converted.

SECTION 15.4. Conversion Rate. Each \$1,000 principal amount of the Notes shall be convertible into the number of shares of Common Stock specified in the form of Note (herein called the "CONVERSION RATE") attached as Exhibit A hereto, subject to adjustment as provided in this Article 15.

SECTION 15.5. Adjustment of Conversion Rate. The Conversion Rate shall be adjusted from time to time by the Company as follows:

(a) In case the Company shall hereafter pay a dividend or make a distribution to all holders of the outstanding Common Stock in shares of Common Stock, the Conversion Rate shall be increased so that the same shall equal the rate determined by multiplying the Conversion Rate in effect at the opening of business on the date following the date fixed for the determination of stockholders entitled to receive such dividend or other distribution by a fraction,

(i) the numerator of which shall be the sum of the number of shares of Common Stock outstanding at the close of business on the date fixed for the determination of stockholders entitled to receive such dividend or other distribution plus the total number of shares of Common Stock constituting such dividend or other distribution; and

(ii) the denominator of which shall be the number of shares of Common Stock outstanding at the close of business on the date fixed for such determination,

such increase to become effective immediately after the opening of business on the day following the date fixed for such determination. For the purpose of this paragraph (a), the number of shares of Common Stock at any time outstanding shall not include shares held in the treasury of the Company. The Company will not pay any dividend or make any distribution on shares of Common Stock held in the treasury of the Company. If any dividend or distribution of the type described in this Section 15.05(a) is declared but not so paid or made, the Conversion Rate shall again be adjusted to the Conversion Rate that would then be in effect if such dividend or distribution had not been declared.

(b) In case the Company shall issue rights or warrants to all holders of its outstanding shares of Common Stock entitling them (for a period expiring within forty-five (45) days after the date fixed for determination of stockholders

entitled to receive such rights or warrants) to subscribe for or purchase shares of Common Stock at a price per share less than the Current Market Price (as defined below) on the date fixed for determination of stockholders entitled to receive such rights or warrants, the Conversion Rate shall be increased so that the same shall equal the rate determined by multiplying the Conversion Rate in effect immediately prior to the date fixed for determination of stockholders entitled to receive such rights or warrants by a fraction,

(i) the numerator of which shall be the sum of the number of shares of Common Stock outstanding on the date fixed for determination of stockholders entitled to receive such rights or warrants plus the total number of additional shares of Common Stock offered for subscription or purchase, and

(ii) the denominator of which shall be the sum of the number of shares of Common Stock outstanding at the close of business on the date fixed for determination of stockholders entitled to receive such rights or warrants plus the number of shares that the aggregate offering price of the total number of shares so offered would purchase at such Current Market Price.

Such adjustment shall be successively made whenever any such rights or warrants are issued, and shall become effective immediately after the opening of business on the day following the date fixed for determination of stockholders entitled to receive such rights or warrants. To the extent that shares of Common Stock are not delivered after the expiration of such rights or warrants, the Conversion Rate shall be readjusted to the Conversion Rate that would then be in effect had the adjustments made upon the issuance of such rights or warrants been made on the basis of delivery of only the number of shares of Common Stock actually delivered. If such rights or warrants are not so issued, the Conversion Rate shall again be adjusted to be the Conversion Rate that would then be in effect if such date fixed for the determination of stockholders entitled to receive such rights or warrants had not been fixed. In determining whether any rights or warrants entitle the holders to subscribe for or purchase shares of Common Stock at less than such Current Market Price, and in determining the aggregate offering price of such shares of Common Stock, there shall be taken into account any consideration received by the Company for such rights or warrants and any amount payable on exercise or conversion thereof, the value of such consideration, if other than cash, to be determined by the Board of Directors.

(c) In case outstanding shares of Common Stock shall be subdivided into a greater number of shares of Common Stock, the Conversion Rate in effect at the opening of business on the day following the day upon which such

subdivision becomes effective shall be proportionately increased, and conversely, in case outstanding shares of Common Stock shall be combined into a smaller number of shares of Common Stock, the Conversion Rate in effect at the opening of business on the day following the day upon which such combination becomes effective shall be proportionately reduced, such increase or reduction, as the case may be, to become effective immediately after the opening of business on the day following the day upon which such subdivision or combination becomes effective.

(d) In case the Company shall, by dividend or otherwise, distribute to all holders of its Common Stock shares of any class of capital stock of the Company or evidences of its indebtedness or assets (including securities, but excluding any rights or warrants referred to in Section 15.05(b), and excluding any dividend or distribution (x) paid exclusively in cash or (y) referred to in Section 15.05(a) (any of the foregoing hereinafter in this Section 15.05(d) called the "SECURITIES")), then, in each such case (unless the Company elects to reserve such Securities for distribution to the Noteholders upon the conversion of the Notes so that any such holder converting Notes will receive upon such conversion, in addition to the shares of Common Stock to which such holder is entitled, the amount and kind of such Securities which such holder would have received if such holder had converted its Notes into Common Stock immediately prior to the Record Date (as defined in Section 15.05(h)(4)) for such distribution of the Securities), the Conversion Rate shall be increased so that the same shall be equal to the rate determined by multiplying the Conversion Rate in effect on the Record Date with respect to such distribution by a fraction,

(i) the numerator of which shall be the Current Market Price on such Record Date; and

(ii) the denominator of which shall be the Current Market Price on such Record Date less the fair market value (as determined by the Board of Directors, whose determination shall be conclusive, and described in a resolution of the Board of Directors) on the Record Date of the portion of the Securities so distributed applicable to one share of Common Stock,

such adjustment to become effective immediately prior to the opening of business on the day following such Record Date; provided that if the then fair market value (as so determined) of the portion of the Securities so distributed applicable to one share of Common Stock is equal to or greater than the Current Market Price on the Record Date, in lieu of the foregoing adjustment, adequate provision shall be made so that each Noteholder shall have the right to receive upon conversion the amount of Securities such holder would have received had such holder converted each Note on the Record Date. If such dividend or distribution is not so paid or

made, the Conversion Rate shall again be adjusted to be the Conversion Rate that would then be in effect if such dividend or distribution had not been declared. If the Board of Directors determines the fair market value of any distribution for purposes of this Section 15.05(d) by reference to the actual or when issued trading market for any securities, it must in doing so consider the prices in such market over the same period used in computing the Current Market Price on the applicable Record Date.

Rights or warrants distributed by the Company to all holders of Common Stock entitling the holders thereof to subscribe for or purchase shares of the Company's capital stock (either initially or under certain circumstances), which rights or warrants, until the occurrence of a specified event or events ("TRIGGER EVENT"): (i) are deemed to be transferred with such shares of Common Stock; (ii) are not exercisable; and (iii) are also issued in respect of future issuances of Common Stock, shall be deemed not to have been distributed for purposes of this Section 15.05 (and no adjustment to the Conversion Rate under this Section 15.05 will be required) until the occurrence of the earliest Trigger Event, whereupon such rights and warrants shall be deemed to have been distributed and an appropriate adjustment (if any is required) to the Conversion Rate shall be made under this Section 15.05(d). If any such right or warrant, including any such existing rights or warrants distributed prior to the date of this Indenture, are subject to events, upon the occurrence of which such rights or warrants become exercisable to purchase different securities, evidences of indebtedness or other assets, then the date of the occurrence of any and each such event shall be deemed to be the date of distribution and record date with respect to new rights or warrants with such rights (and a termination or expiration of the existing rights or warrants without exercise by any of the holders thereof). In addition, in the event of any distribution (or deemed distribution) of rights or warrants, or any Trigger Event or other event (of the type described in the preceding sentence) with respect thereto that was counted for purposes of calculating a distribution amount for which an adjustment to the Conversion Rate under this Section 15.05 was made, (1) in the case of any such rights or warrants that shall all have been redeemed or repurchased without exercise by any holders thereof, the Conversion Rate shall be readjusted upon such final redemption or repurchase to give effect to such distribution or Trigger Event, as the case may be, as though it were a cash distribution, equal to the per share redemption or repurchase price received by a holder or holders of Common Stock with respect to such rights or warrants (assuming such holder had retained such rights or warrants), made to all holders of Common Stock as of the date of such redemption or repurchase, and (2) in the case of such rights or warrants that shall have expired or been terminated without exercise by any holders thereof, the Conversion Rate shall be readjusted as if such rights and warrants had not been issued.

No adjustment of the Conversion Rate shall be made pursuant to this Section 15.05(d) in respect of rights or warrants distributed or deemed distributed on any Trigger Event to the extent that such rights or warrants are actually distributed, or reserved by the Company for distribution to holders of Notes upon conversion by such holders of Notes to Common Stock.

For purposes of this Section 15.05(d) and Sections 15.05(a) and (b), any dividend or distribution to which this Section 15.05(d) is applicable that also includes shares of Common Stock, or rights or warrants to subscribe for or purchase shares of Common Stock (or both), shall be deemed instead to be (1) a dividend or distribution of the evidences of indebtedness, assets or shares of capital stock other than such shares of Common Stock or rights or warrants (and any Conversion Rate adjustment required by this Section 15.05(d) with respect to such dividend or distribution shall then be made) immediately followed by (2) a dividend or distribution of such shares of Common Stock or such rights or warrants (and any further Conversion Rate adjustment required by Sections 15.05(a) and (b) with respect to such dividend or distribution shall then be made), except (A) the Record Date of such dividend or distribution shall be substituted as "the date fixed for the determination of stockholders entitled to receive such dividend or other distribution", "the date fixed for the determination of stockholders entitled to receive such rights or warrants" and "the date fixed for such determination" within the meaning of Sections 15.05(a) and (b), and (B) any shares of Common Stock included in such dividend or distribution shall not be deemed "outstanding at the close of business on the date fixed for such determination" within the meaning of Section 15.05(a).

(e) In case the Company shall, by dividend or otherwise, distribute to all holders of its Common Stock cash (excluding (x) any quarterly cash dividend on the Common Stock to the extent the aggregate cash dividend per share of Common Stock in any fiscal quarter does not exceed the greater of (A) the amount per share of Common Stock of the next preceding quarterly cash dividend on the Common Stock to the extent that such preceding quarterly dividend did not require any adjustment of the Conversion Rate pursuant to this Section 15.05(e) (as adjusted to reflect subdivisions, or combinations of the Common Stock), and (B) 3.75% of the arithmetic average of the Closing Price (determined as set forth in Section 15.05(h)) during the ten Trading Days (as defined in Section 15.05(h)) immediately prior to the date of declaration of such dividend, and (y) any dividend or distribution in connection with the liquidation, dissolution or winding up of the Company, whether voluntary or involuntary), then, in such case, the Conversion Rate shall be increased so that the same shall equal the rate determined by multiplying the Conversion Rate in effect immediately prior to the close of business on such record date by a fraction,

(i) the numerator of which shall be the Current Market Price on such record date; and

(ii) the denominator of which shall be the Current Market Price on such record date less the amount of cash so distributed (and not excluded as provided above) applicable to one share of Common Stock,

such adjustment to be effective immediately prior to the opening of business on the day following the record date; provided that if the portion of the cash so distributed applicable to one share of Common Stock is equal to or greater than the Current Market Price on the record date, in lieu of the foregoing adjustment, adequate provision shall be made so that each Noteholder shall have the right to receive upon conversion the amount of cash such holder would have received had such holder converted each Note on the record date. If such dividend or distribution is not so paid or made, the Conversion Rate shall again be adjusted to be the Conversion Rate that would then be in effect if such dividend or distribution had not been declared. If any adjustment is required to be made as set forth in this Section 15.05(e) as a result of a distribution that is a quarterly dividend, such adjustment shall be based upon the amount by which such distribution exceeds the amount of the quarterly cash dividend permitted to be excluded pursuant hereto. If an adjustment is required to be made as set forth in this Section 15.05(e) above as a result of a distribution that is not a quarterly dividend, such adjustment shall be based upon the full amount of the distribution.

(f) In case a tender or exchange offer made by the Company or any Subsidiary for all or any portion of the Common Stock shall expire and such tender or exchange offer (as amended upon the expiration thereof) shall require the payment to stockholders of consideration per share of Common Stock having a fair market value (as determined by the Board of Directors, whose determination shall be conclusive and described in a resolution of the Board of Directors) that as of the last time (the "EXPIRATION TIME") tenders or exchanges may be made pursuant to such tender or exchange offer (as it may be amended) exceeds the Closing Price of a share of Common Stock on the Trading Day next succeeding the Expiration Time, the Conversion Rate shall be increased so that the same shall equal the rate determined by multiplying the Conversion Rate in effect immediately prior to the Expiration Time by a fraction

(i) the numerator of which shall be the sum of (x) the fair market value (determined as aforesaid) of the aggregate consideration payable to stockholders based on the acceptance (up to any maximum specified in the terms of the tender or exchange offer) of all shares validly tendered or exchanged and not withdrawn as of the Expiration Time (the shares deemed so accepted up to any such maximum, being referred to as the

"PURCHASED SHARES") and (y) the product of the number of shares of Common Stock outstanding (less any Purchased Shares) at the Expiration Time and the Closing Price of a share of Common Stock on the Trading Day next succeeding the Expiration Time, and

(ii) the denominator of which shall be the number of shares of Common Stock outstanding (including any tendered or exchanged shares) at the Expiration Time multiplied by the Closing Price of a share of Common Stock on the Trading Day next succeeding the Expiration Time

such adjustment to become effective immediately prior to the opening of business on the day following the Expiration Time. If the Company is obligated to purchase shares pursuant to any such tender or exchange offer, but the Company is permanently prevented by applicable law from effecting any such purchases or all such purchases are rescinded, the Conversion Rate shall again be adjusted to be the Conversion Rate that would then be in effect if such tender or exchange offer had not been made.

(g) In case of a tender or exchange offer made by a Person other than the Company or any Subsidiary for an amount that increases the offeror's ownership of Common Stock to more than twenty-five percent (25%) of the Common Stock outstanding and shall involve the payment by such Person of consideration per share of Common Stock having a fair market value (as determined by the Board of Directors, whose determination shall be conclusive, and described in a resolution of the Board of Directors) that as of the last time (the "OFFER EXPIRATION TIME") tenders or exchanges may be made pursuant to such tender or exchange offer (as it shall have been amended) that exceeds the Closing Price of a share of Common Stock on the Trading Day next succeeding the Offer Expiration Time, and in which, as of the Offer Expiration Time the Board of Directors is not recommending rejection of the offer, the Conversion Rate shall be increased so that the same shall equal the rate determined by multiplying the Conversion Rate in effect immediately prior to the Offer Expiration Time by a fraction

(i) the numerator of which shall be the sum of (x) the fair market value (determined as aforesaid) of the aggregate consideration payable to stockholders based on the acceptance (up to any maximum specified in the terms of the tender or exchange offer) of all shares validly tendered or exchanged and not withdrawn as of the Offer Expiration Time (the shares deemed so accepted, up to any such maximum, being referred to as the "ACCEPTED PURCHASED SHARES") and (y) the product of the number of shares of Common Stock outstanding (less any Accepted Purchased Shares) at the Offer Expiration Time and the Closing Price of a

share of Common Stock on the Trading Day next succeeding the Offer Expiration Time, and

(ii) the denominator of which shall be the number of shares of Common Stock outstanding (including any tendered or exchanged shares) at the Offer Expiration Time multiplied by the Closing Price of a share of Common Stock on the Trading Day next succeeding the Offer Expiration Time,

such adjustment to become effective immediately prior to the opening of business on the day following the Offer Expiration Time. If such Person is obligated to purchase shares pursuant to any such tender or exchange offer, but such Person is permanently prevented by applicable law from effecting any such purchases or all such purchases are rescinded, the Conversion Rate shall again be adjusted to be the Conversion Rate that would then be in effect if such tender or exchange offer had not been made. Notwithstanding the foregoing, the adjustment described in this Section 15.05(g) shall not be made if, as of the Offer Expiration Time, the offering documents with respect to such offer disclose a plan or intention to cause the Company to engage in any transaction described in Article 12.

(h) For purposes of this Section 15.05, the following terms shall have the meaning indicated:

(1) "CLOSING PRICE" with respect to any security on any day shall mean the closing sale price, regular way, on such day or, in case no such sale takes place on such day, the average of the reported closing bid and asked prices, regular way, in each case as quoted on the Nasdaq National Market or, if such security is not quoted or listed or admitted to trading on such Nasdaq National Market, on the principal national securities exchange or quotation system on which such security is quoted or listed or admitted to trading or, if not quoted or listed or admitted to trading on any national securities exchange or quotation system, the average of the closing bid and asked prices of such security on the over-the-counter market on the day in question as reported by the National Quotation Bureau Incorporated, or a similar generally accepted reporting service, or if not so available, in such manner as furnished by any New York Stock Exchange member firm selected from time to time by the Board of Directors for that purpose, or a price determined in good faith by the Board of Directors or, to the extent permitted by applicable law, a duly authorized committee thereof, whose determination shall be conclusive.

(2) "CURRENT MARKET PRICE" shall mean the average of the daily Closing Prices per share of Common Stock for the ten consecutive Trading

Days selected by the Company commencing no more than 30 Trading Days before and ending not later than the earlier of such date of determination and the day before the "ex" date with respect to the issuance, distribution, subdivision or combination requiring such computation immediately prior to the date in question. For purpose of this paragraph, the term "ex" date, (1) when used with respect to any issuance or distribution, means the first date on which the Common Stock trades, regular way, on the relevant exchange or in the relevant market from which the Closing Price was obtained without the right to receive such issuance or distribution, and (2) when used with respect to any subdivision or combination of shares of Common Stock, means the first date on which the Common Stock trades, regular way, on such exchange or in such market after the time at which such subdivision or combination becomes effective.

(3) "FAIR MARKET VALUE" shall mean the amount which a willing buyer would pay a willing seller in an arm's-length transaction.

(4) "RECORD DATE" shall mean, with respect to any dividend, distribution or other transaction or event in which the holders of Common Stock have the right to receive any cash, securities or other property or in which the Common Stock (or other applicable security) is exchanged for or converted into any combination of cash, securities or other property, the date fixed for determination of stockholders entitled to receive such cash, securities or other property (whether such date is fixed by the Board of Directors or by statute, contract or otherwise).

(5) "TRADING DAY" shall mean (x) if the applicable security is quoted on the Nasdaq National Market, a day on which trades may be made thereon or (y) if the applicable security is listed or admitted for trading on the New York Stock Exchange or another national securities exchange, a day on which the New York Stock Exchange or another national securities exchange is open for business or (z) if the applicable security is not so listed, admitted for trading or quoted, any day other than a Saturday or Sunday or a day on which banking institutions in the State of New York are authorized or obligated by law or executive order to close.

(i) The Company may make such increases in the Conversion Rate, in addition to those required by Sections 15.05(a), (b), (c), (d), (e), (f) or (g) as the Board of Directors considers to be advisable to avoid or diminish any income tax to holders of Common Stock or rights to purchase Common Stock resulting from any dividend or distribution of stock (or rights to acquire stock) or from any event treated as such for income tax purposes.

To the extent permitted by applicable law, the Company from time to time may increase the Conversion Rate by any amount for any period of time if the period is at least twenty (20) days, the increase is irrevocable during the period and the Board of Directors shall have made a determination that such increase would be in the best interests of the Company, which determination shall be conclusive. Whenever the Conversion Rate is increased pursuant to the preceding sentence, the Company shall mail to holders of record of the Notes a notice of the increase at least fifteen (15) days prior to the date the increased Conversion Rate takes effect, and such notice shall state the increased Conversion Rate and the period during which it will be in effect.

(j) No adjustment in the Conversion Rate shall be required unless such adjustment would require an increase or decrease of at least one percent (1%) in such rate; provided that any adjustments that by reason of this Section 15.05) are not required to be made shall be carried forward and taken into account in any subsequent adjustment. All calculations under this Article 15 shall be made by the Company and shall be made to the nearest cent or to the nearest one-ten thousandth (1/10,000) of a share, as the case may be. No adjustment need be made for rights to purchase Common Stock pursuant to a Company plan for reinvestment of dividends or interest. To the extent the Notes become convertible into cash, assets, property or securities (other than capital stock of the Company), no adjustment need be made thereafter as to the cash, assets, property or such securities. Interest will not accrue on any cash into which the Notes are convertible.

(k) Whenever the Conversion Rate is adjusted as herein provided, the Company shall promptly file with the Trustee and any conversion agent other than the Trustee an Officers' Certificate setting forth the Conversion Rate after such adjustment and setting forth a brief statement of the facts requiring such adjustment. Unless and until a Responsible Officer of the Trustee shall have received such Officers' Certificate, the Trustee shall not be deemed to have knowledge of any adjustment of the Conversion Rate and may assume that the last Conversion Rate of which it has knowledge is still in effect. Promptly after delivery of such certificate, the Company shall prepare a notice of such adjustment of the Conversion Rate setting forth the adjusted Conversion Rate and the date on which each adjustment becomes effective and shall mail such notice of such adjustment of the Conversion Rate to the holder of each Note at his last address appearing on the Note register provided for in Section 2.05 of this Indenture, within twenty (20) days after execution thereof. Failure to deliver such notice shall not affect the legality or validity of any such adjustment.

(1) In any case in which this Section 15.05 provides that an adjustment shall become effective immediately after (1) a record date or Record Date for an event, (2) the date fixed for the determination of stockholders entitled to receive a dividend or distribution pursuant to Section 15.05(a), (3) a date fixed for the determination of stockholders entitled to receive rights or warrants pursuant to Section 15.05(b), (4) the Expiration Time for any tender or exchange offer pursuant to Section 15.05(f), or (5) the Offer Expiration Time for a tender or exchange offer pursuant to Section 15.05(g) (each a "DETERMINATION DATE"), the Company may elect to defer until the occurrence of the applicable Adjustment Event (as hereinafter defined) (x) issuing to the holder of any Note converted after such Determination Date and before the occurrence of such Adjustment Event, the additional shares of Common Stock or other securities issuable upon such conversion by reason of the adjustment required by such Adjustment Event over and above the Common Stock issuable upon such conversion before giving effect to such adjustment and (y) paying to such holder any amount in cash in lieu of any fraction pursuant to Section 15.03. For purposes of this Section 15.05(1), the term "ADJUSTMENT EVENT" shall mean:

(i) in any case referred to in clause (1) hereof, the occurrence of such event,

(ii) in any case referred to in clause (2) hereof, the date any such dividend or distribution is paid or made,

(iii) in any case referred to in clause (3) hereof, the date of expiration of such rights or warrants, and

(iv) in any case referred to in clause (4) or clause (5) hereof, the date a sale or exchange of Common Stock pursuant to such tender or exchange offer is consummated and becomes irrevocable.

(m) For purposes of this Section 15.05, the number of shares of Common Stock at any time outstanding shall not include shares held in the treasury of the Company but shall include shares issuable in respect of scrip certificates issued in lieu of fractions of shares of Common Stock. The Company will not pay any dividend or make any distribution on shares of Common Stock held in the treasury of the Company.

SECTION 15.6. Effect of Reclassification, Consolidation, Merger or Sale. If any of the following events occur, namely (i) any reclassification or change of the outstanding shares of Common Stock (other than a subdivision or combination to which Section 15.05(c) applies), (ii) any consolidation, merger or combination of the Company with another Person as a result of which holders of Common

Stock shall be entitled to receive stock, other securities or other property or assets (including cash) with respect to or in exchange for such Common Stock, or (iii) any sale or conveyance of all or substantially all of the properties and assets of the Company to any other Person as a result of which holders of Common Stock shall be entitled to receive stock, other securities or other property or assets (including cash) with respect to or in exchange for such Common Stock, then the Company or the successor or purchasing Person, as the case may be, shall execute with the Trustee a supplemental indenture (which shall comply with the Trust Indenture Act as in force at the date of execution of such supplemental indenture) providing that each Note shall be convertible into the kind and amount of shares of stock, other securities or other property or assets (including cash) receivable upon such reclassification, change, consolidation, merger, combination, sale or conveyance by a holder of a number of shares of Common Stock issuable upon conversion of such Notes (assuming, for such purposes, a sufficient number of authorized shares of Common Stock are available to convert all such Notes) immediately prior to such reclassification, change, consolidation, merger, combination, sale or conveyance assuming such holder of Common Stock did not exercise his rights of election, if any, as to the kind or amount of stock, other securities or other property or assets (including cash) receivable upon such reclassification, change, consolidation, merger, combination, sale or conveyance (provided that, if the kind or amount of stock, other securities or other property or assets (including cash) receivable upon such reclassification, change, consolidation, merger, combination, sale or conveyance is not the same for each share of Common Stock in respect of which such rights of election shall not have been exercised ("NONELECTING SHARE"), then for the purposes of this Section 15.06 the kind and amount of stock, other securities or other property or assets (including cash) receivable upon such reclassification, change, consolidation, merger, combination, sale or conveyance for each non-electing share shall be deemed to be the kind and amount so receivable per share by a plurality of the non-electing shares). Such supplemental indenture shall provide for adjustments which shall be as nearly equivalent as may be practicable to the adjustments provided for in this Article 15.

The Company shall cause notice of the execution of such supplemental indenture to be mailed to each holder of Notes, at its address appearing on the Note register provided for in Section 2.05 of this Indenture, within twenty (20) days after execution thereof. Failure to deliver such notice shall not affect the legality or validity of such supplemental indenture.

The above provisions of this Section shall similarly apply to successive reclassifications, changes, consolidations, mergers, combinations, sales and conveyances.

If this Section 15.06 applies to any event or occurrence, Section 15.05 shall not apply.

SECTION 15.7. Taxes on Shares Issued. The issue of stock certificates on conversions of Notes shall be made without charge to the converting Noteholder for any documentary, stamp or similar issue or transfer tax in respect of the issue thereof. The Company shall not, however, be required to pay any such tax which may be payable in respect of any transfer involved in the issue and delivery of stock in any name other than that of the holder of any Note converted, and the Company shall not be required to issue or deliver any such stock certificate unless and until the Person or Persons requesting the issue thereof shall have paid to the Company the amount of such tax or shall have established to the satisfaction of the Company that such tax has been paid.

SECTION 15.8. Reservation of Shares, Shares to Be Fully Paid; Compliance with Governmental Requirements; Listing of Common Stock. The Company shall provide, free from preemptive rights, out of its authorized but unissued shares or shares held in treasury, sufficient shares of Common Stock to provide for the conversion of the Notes from time to time as such Notes are presented for conversion.

Before taking any action which would cause an adjustment increasing the Conversion Rate to an amount that would cause the Conversion Price to be reduced below the then par value, if any, of the shares of Common Stock issuable upon conversion of the Notes, the Company will take all corporate action which may, in the opinion of its counsel, be necessary in order that the Company may validly and legally issue shares of such Common Stock at such adjusted Conversion Rate.

The Company covenants that all shares of Common Stock which may be issued upon conversion of Notes will upon issue be fully paid and non-assessable by the Company and free from all taxes, liens and charges with respect to the issue thereof.

The Company covenants that, if any shares of Common Stock to be provided for the purpose of conversion of Notes hereunder require registration with or approval of any governmental authority under any federal or state law before such shares may be validly issued upon conversion, the Company will in good faith and as expeditiously as possible, to the extent then permitted by the rules and interpretations of the Securities and Exchange Commission (or any successor thereto), endeavor to secure such registration or approval, as the case may be.

The Company further covenants that, if at any time the Common Stock shall be listed on the Nasdaq National Market or any other national securities exchange or automated quotation system, the Company will, if permitted by the rules of such exchange or automated quotation system, list and keep listed, so long as the Common Stock shall be so listed on such exchange or automated quotation system, all Common Stock issuable upon conversion of the Note; provided that, if the rules of such exchange or automated quotation system permit the Company to defer the listing of such Common Stock until the first conversion of the Notes into Common Stock in accordance with the provisions of this Indenture, the Company covenants to list such Common Stock issuable upon conversion of the Notes in accordance with the requirements of such exchange or automated quotation system at such time.

SECTION 15.9. Responsibility of Trustee. The Trustee and any other conversion agent shall not at any time be under any duty or responsibility to any holder of Notes to determine the Conversion Rate or whether any facts exist which may require any adjustment of the Conversion Rate, or with respect to the nature or extent or calculation of any such adjustment when made, or with respect to the method employed, or herein or in any supplemental indenture provided to be employed, in making the same. The Trustee and any other conversion agent shall not be accountable with respect to the validity or value (or the kind or amount) of any shares of Common Stock, or of any securities or property, which may at any time be issued or delivered upon the conversion of any Note; and the Trustee and any other conversion agent make no representations with respect thereto. Neither the Trustee nor any conversion agent shall be responsible for any failure of the Company to issue, transfer or deliver any shares of Common Stock or stock certificates or other securities or property or cash upon the surrender of any Note for the purpose of conversion or to comply with any of the duties, responsibilities or covenants of the Company contained in this Article 15. Without limiting the generality of the foregoing, neither the Trustee nor any conversion agent shall be under any responsibility to determine the correctness of any provisions contained in any supplemental indenture entered into pursuant to Section 15.06 relating either to the kind or amount of shares of stock or securities or property (including cash) receivable by Noteholders upon the conversion of their Notes after any event referred to in such Section 15.06 or to any adjustment to be made with respect thereto, but, subject to the provisions of Section 8.01, may accept as conclusive evidence of the correctness of any such provisions, and shall be protected in relying upon, the Officers' Certificate (which the Company shall be obligated to file with the Trustee prior to the execution of any such supplemental indenture) with respect thereto.

SECTION 15.10. Notice to Holders Prior to Certain Actions. In case:

(a) the Company shall declare a dividend (or any other distribution) on its Common Stock that would require an adjustment in the Conversion Rate pursuant to Section 15.05; or

(b) the Company shall authorize the granting to the holders of all or substantially all of its Common Stock of rights or warrants to subscribe for or purchase any share of any class or any other rights or warrants; or

(c) of any reclassification or reorganization of the Common Stock of the Company (other than a subdivision or combination of its outstanding Common Stock, or a change in par value, or from par value to no par value, or from no par value to par value), or of any consolidation or merger to which the Company is a party and for which approval of any stockholders of the Company is required, or of the sale or transfer of all or substantially all of the assets of the Company; or

(d) of the voluntary or involuntary dissolution, liquidation or winding up of the Company;

the Company shall cause to be filed with the Trustee and to be mailed to each holder of Notes at his address appearing on the Note register provided for in Section 2.05 of this Indenture, as promptly as possible but in any event at least ten (10) days prior to the applicable date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution or rights or warrants, or, if a record is not to be taken, the date as of which the holders of Common Stock of record to be entitled to such dividend, distribution or rights are to be determined, or (y) the date on which such reclassification, consolidation, merger, sale, transfer, dissolution, liquidation or winding up is expected to become effective or occur, and the date as of which it is expected that holders of Common Stock of record shall be entitled to exchange their Common Stock for securities or other property deliverable upon such reclassification, consolidation, merger, sale, transfer, dissolution, liquidation or winding up. Failure to give such notice, or any defect therein, shall not affect the legality or validity of such dividend, distribution, reclassification, consolidation, merger, sale, transfer, dissolution, liquidation or winding up.

SECTION 15.11. Rights Issued in Respect of Common Stock Issued upon Conversion. Each share of Common Stock issued upon conversion of Notes pursuant to this Article 15 shall be entitled to receive the appropriate number of rights, if any, and the certificates representing the Common Stock issued upon such conversion shall bear such legends, if any, in each case as may be provided by the terms of any shareholder rights agreement adopted by the Company, as the same may be amended from time to time.

ARTICLE 16

MISCELLANEOUS PROVISIONS

SECTION 16.1. Provisions Binding on Company's Successors. All the covenants, stipulations, promises and agreements by the Company contained in this Indenture shall bind its successors and assigns whether so expressed or not.

SECTION 16.2. Official Acts by Successor Corporation. Any act or proceeding by any provision of this Indenture authorized or required to be done or performed by any board, committee or officer of the Company shall and may be done and performed with like force and effect by the like board, committee or officer of any Person that shall at the time be the lawful sole successor of the Company.

SECTION 16.3. Addresses for Notices, Etc. Any notice or demand which by any provision of this Indenture is required or permitted to be given or served by the Trustee or by the holders of Notes on the Company shall be deemed to have been sufficiently given or made, for all purposes, if given or served by being deposited postage prepaid by registered or certified mail in a post office letter box addressed (until another address is filed by the Company with the Trustee) to Photronics, Inc., 1061 East Indiantown Road, Jupiter, Florida 33477, Attention: Treasurer. Any notice, direction, request or demand hereunder to or upon the Trustee shall be deemed to have been sufficiently given or made, for all purposes, if given or served by being deposited, postage prepaid, by registered or certified mail in a post office letter box addressed to the Corporate Trust Office, which office is, at the date as of which this Indenture is dated, located at One Liberty Plaza, New York New York 10006.

The Trustee, by notice to the Company, may designate additional or different addresses for subsequent notices or communications.

Any notice or communication mailed to a Noteholder shall be mailed to him by first class mail, postage prepaid, at his address as it appears on the Note register and shall be sufficiently given to him if so mailed within the time prescribed.

Failure to mail a notice or communication to a Noteholder or any defect in it shall not affect its sufficiency with respect to other Noteholders. If a notice or communication is mailed in the manner provided above, it is duly given, whether or not the addressee receives it.

SECTION 16.4. Governing Law. This Indenture and each Note shall be deemed to be a contract made under the laws of the State of New York, and for all purposes shall be construed in accordance with the laws of the State of New York.

SECTION 16.5. Evidence of Compliance with Conditions Precedent, Certificates to Trustee. Upon any application or demand by the Company to the Trustee to take any action under any of the provisions of this Indenture, the Company shall furnish to the Trustee an Officers' Certificate stating that all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been complied with, and an Opinion of Counsel stating that, in the opinion of such counsel, all such conditions precedent have been complied with.

Each certificate or opinion provided for in this Indenture and delivered to the Trustee with respect to compliance with a condition or covenant provided for in this Indenture shall include: (1) a statement that the person making such certificate or opinion has read such covenant or condition; (2) a brief statement as to the nature and scope of the examination or investigation upon which the statement or opinion contained in such certificate or opinion is based; (3) a statement that, in the opinion of such person, he has made such examination or investigation as is necessary to enable him to express an informed opinion as to whether or not such covenant or condition has been complied with; and (4) a statement as to whether or not, in the opinion of such person, such condition or covenant has been complied with.

SECTION 16.6. Legal Holidays. In any case in which the date of maturity of interest on or principal of the Notes or the date fixed for redemption of any Note will not be a Business Day, then payment of such interest on or principal of the Notes need not be made on such date, but may be made on the next succeeding Business Day with the same force and effect as if made on the date of maturity or the date fixed for redemption, and no interest shall accrue for the period from and after such date.

SECTION 16.7. Trust Indenture Act. This Indenture is hereby made subject to, and shall be governed by, the provisions of the Trust Indenture Act required to be part of and to govern indentures qualified under the Trust Indenture Act; provided that, unless otherwise required by law, notwithstanding the foregoing, this Indenture and the Notes issued hereunder shall not be subject to the provisions of subsections (a)(1), (a)(2), and (a)(3) of Section 314 of the Trust Indenture Act as now in effect or as hereafter amended or modified; provided further that this Section 16.07 shall not require this Indenture or the Trustee to be qualified under the Trust Indenture Act prior to the time such qualification is in fact required under the terms of the Trust Indenture Act, nor shall it constitute any admission or acknowledgment by any party to the Indenture that any such

qualification is required prior to the time such qualification is in fact required under the terms of the Trust Indenture Act. If any provision hereof limits, qualifies or conflicts with another provision hereof which is required to be included in an indenture qualified under the Trust Indenture Act, such required provision shall control.

SECTION 16.8. No Security Interest Created. Nothing in this Indenture or in the Notes, expressed or implied, shall be construed to constitute a security interest under the Uniform Commercial Code or similar legislation, as now or hereafter enacted and in effect, in any jurisdiction in which property of the Company or its subsidiaries is located.

SECTION 16.9. Benefits of Indenture. Nothing in this Indenture or in the Notes, express or implied, shall give to any Person, other than the parties hereto, any paying agent, any authenticating agent, any Note registrar and their successors hereunder, the holders of Notes and the holders of Senior Indebtedness, any benefit or any legal or equitable right, remedy or claim under this Indenture.

SECTION 16.10. Table of Contents, Headings, Etc. The table of contents and the titles and headings of the articles and Sections of this Indenture have been inserted for convenience of reference only, are not to be considered a part hereof, and shall in no way modify or restrict any of the terms or provisions hereof.

SECTION 16.11. Authenticating Agent. The Trustee may appoint an authenticating agent that shall be authorized to act on its behalf, and subject to its direction, in the authentication and delivery of Notes in connection with the original issuance thereof and transfers and exchanges of Notes hereunder, including under Sections 2.04, 2.05, 2.06, 2.07, 3.03 and 3.05, as fully to all intents and purposes as though the authenticating agent had been expressly authorized by this Indenture and those Sections to authenticate and deliver Notes. For all purposes of this Indenture, the authentication and delivery of Notes by the authenticating agent shall be deemed to be authentication and delivery of such Notes "by the Trustee" and a certificate of authentication executed on behalf of the Trustee by an authenticating agent shall be deemed to satisfy any requirement hereunder or in the Notes for the Trustee's certificate of authentication. Such authenticating agent shall at all times be a Person eligible to serve as trustee hereunder pursuant to Section 8.09.

Any corporation into which any authenticating agent may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, consolidation or conversion to which any authenticating agent shall be a party, or any corporation succeeding to the corporate trust business of any authenticating agent, shall be the successor of the authenticating agent hereunder, if such successor corporation is otherwise eligible under this Section 16.11,

without the execution or filing of any paper or any further act on the part of the parties hereto or the authenticating agent or such successor corporation.

Any authenticating agent may at any time resign by giving written notice of resignation to the Trustee and to the Company. The Trustee may at any time terminate the agency of any authenticating agent by giving written notice of termination to such authenticating agent and to the Company. Upon receiving such a notice of resignation or upon such a termination, or in case at any time any authenticating agent shall cease to be eligible under this Section, the Trustee shall either promptly appoint a successor authenticating agent or itself assume the duties and obligations of the former authenticating agent under this Indenture and, upon such appointment of a successor authenticating agent, if made, shall give written notice of such appointment of a successor authenticating agent to the Company and shall mail notice of such appointment of a successor authenticating agent to all holders of Notes as the names and addresses of such holders appear on the Note register.

The Company agrees to pay to the authenticating agent from time to time such reasonable compensation for its services as shall be agreed upon in writing between the Company and the authenticating agent.

The provisions of Sections 8.02, 8.03, 8.04, 9.03 and this Section 16.11 shall be applicable to any authenticating agent.

SECTION 16.12. Execution in Counterparts. This Indenture may be executed in any number of counterparts, each of which shall be an original, but such counterparts shall together constitute but one and the same instrument.

SECTION 16.13. Severability. In case any provision in this Indenture or in the Notes shall be invalid, illegal or unenforceable, then (to the extent permitted by law) the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

The Bank of Nova Scotia Trust Company of New York hereby accepts the trusts in this Indenture declared and provided, upon the terms and conditions herein above set forth.

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed.

PHOTRONICS, INC.

By: _____
Name:
Title:

THE BANK OF NOVA SCOTIA TRUST
COMPANY OF NEW YORK, as Trustee

By: _____
Name:
Title:

[Include only for Global Notes:]

[UNLESS THIS CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY (55 WATER STREET, NEW YORK, NEW YORK) (THE "DEPOSITARY", WHICH TERM INCLUDES ANY SUCCESSOR DEPOSITARY FOR THE CERTIFICATES) TO THE COMPANY OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR IN SUCH OTHER NAME AS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITARY (AND ANY PAYMENT HEREIN IS MADE TO CEDE & CO. OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITARY), ANY TRANSFER, PLEDGE, OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.]

[Include only for Notes that are Restricted Securities]

[THIS NOTE HAS NOT BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY STATE SECURITIES LAWS, AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. BY ITS ACQUISITION HEREOF, THE HOLDER (1) REPRESENTS THAT IT IS A "QUALIFIED INSTITUTIONAL BUYER" (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT); (2) AGREES THAT IT WILL NOT, PRIOR TO EXPIRATION OF THE HOLDING PERIOD APPLICABLE TO SALES OF THIS NOTE UNDER RULE 144(K) UNDER THE SECURITIES ACT (OR ANY SUCCESSOR PROVISION), RESELL OR OTHERWISE TRANSFER THIS NOTE OR THE COMMON STOCK ISSUABLE UPON CONVERSION OF THIS NOTE EXCEPT (A) TO PHOTRONICS, INC. OR ANY SUBSIDIARY THEREOF, (B) TO A QUALIFIED INSTITUTIONAL BUYER IN COMPLIANCE WITH RULE 144A UNDER THE SECURITIES ACT, (C) PURSUANT TO THE EXEMPTION FROM REGISTRATION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE) OR (D) PURSUANT TO A REGISTRATION STATEMENT WHICH HAS BEEN DECLARED EFFECTIVE UNDER THE SECURITIES ACT (AND WHICH CONTINUES TO BE EFFECTIVE AT THE TIME OF SUCH TRANSFER); (3) PRIOR TO SUCH TRANSFER (OTHER THAN A TRANSFER PURSUANT TO CLAUSE

(2)(D) ABOVE), IT WILL FURNISH TO THE BANK OF NOVA SCOTIA TRUST COMPANY OF NEW YORK, AS TRUSTEE (OR A SUCCESSOR TRUSTEE, AS APPLICABLE), SUCH CERTIFICATIONS, LEGAL OPINIONS OR OTHER INFORMATION AS THE TRUSTEE MAY REASONABLY REQUIRE TO CONFIRM THAT SUCH TRANSFER IS BEING MADE PURSUANT TO AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT; AND (4) AGREES THAT IT WILL DELIVER TO EACH PERSON TO WHOM THIS NOTE IS TRANSFERRED A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND. THIS LEGEND WILL BE REMOVED UPON THE EARLIER OF THE TRANSFER OF THIS NOTE PURSUANT TO CLAUSE (2)(D) ABOVE OR UPON ANY TRANSFER OF THIS NOTE UNDER RULE 144(K) UNDER THE SECURITIES ACT (OR ANY SUCCESSOR PROVISION). THE INDENTURE CONTAINS A PROVISION REQUIRING THE TRUSTEE TO REFUSE TO REGISTER ANY TRANSFER OF THIS NOTE IN VIOLATION OF THE FOREGOING RESTRICTION.]

PHOTRONICS, INC.

4-3/4% CONVERTIBLE SUBORDINATED NOTE DUE 2006

CUSIP:

No. \$

Photronics, Inc., a corporation duly organized and validly existing under the laws of the State of Connecticut (herein called the "COMPANY", which term includes any successor corporation under the Indenture referred to on the reverse hereof), for value received hereby promises to pay to or its registered assigns, the principal sum of _____ DOLLARS on December 15, 2006 at the office or agency of the Company maintained for that purpose in accordance with the terms of the Indenture, in such coin or currency of the United States of America as at the time of payment shall be legal tender for the payment of public and private debts, and to pay interest, semiannually on June 15 and December 15 of each year, commencing June 15, 2002, on said principal sum at said office or agency, in like coin or currency, at the rate per annum of 4-3/4%, from the June 15 or December 15, as the case may be, next preceding the date of this Note to which interest has been paid or duly provided for, unless the date hereof is a date to which interest has been paid or duly provided for, in which case from the date of this Note, or unless no interest has been paid or duly provided for on the Notes, in which case from December 12, 2001, until payment of said principal sum has been made or duly provided for. Notwithstanding the foregoing, if the date hereof is after any June 1 or December 1, as the case may be, and before the following June 15 or December 15, this Note shall bear interest from such June 15 or December 15; provided that if the Company shall default in the payment of interest due on such June 15 or December 15, then this Note shall bear interest from the next preceding June 15 or December 15 to which interest has been paid or duly provided for or, if no interest has been paid or duly provided for on such Note, from December 12, 2001. Except as otherwise provided in the Indenture, the interest payable on the Note pursuant to the Indenture on any June 15 or December 15 will be paid to the Person entitled thereto as it appears in the Note register at the close of business on the record date, which shall be the June 1 or December 1 (whether or not a Business Day) next preceding such June 15 or December 15, as provided in the Indenture; provided that any such interest not punctually paid or duly provided for shall be payable as provided in the Indenture. Interest may, at the option of the Company, be paid either (i) by check mailed to the registered address of such Person (provided that the holder of Notes with an aggregate principal amount in excess of \$2,000,000 shall, at the written election of such holder, be paid by wire transfer of immediately available funds) or (ii) by transfer to an account maintained by such Person located in the United States;

provided that payments to the Depositary will be made by wire transfer of immediately available funds to the account of the Depositary or its nominee.

The Company promises to pay interest on overdue principal, premium, if any, or (to the extent that payment of such interest is enforceable under applicable law) interest at the rate per annum of 4-3/4%.

Reference is made to the further provisions of this Note set forth on the reverse hereof, including, without limitation, provisions subordinating the payment of principal of and premium, if any, and interest on the Notes to the prior payment in full of all Senior Indebtedness, as defined in the Indenture, and provisions giving the holder of this Note the right to convert this Note into Common Stock of the Company on the terms and subject to the limitations referred to on the reverse hereof and as more fully specified in the Indenture. Such further provisions shall for all purposes have the same effect as though fully set forth at this place.

This Note shall be deemed to be a contract made under the laws of the State of New York, and for all purposes shall be construed in accordance with and governed by the laws of the State of New York.

This Note shall not be valid or become obligatory for any purpose until the certificate of authentication hereon shall have been manually signed by the Trustee or a duly authorized authenticating agent under the Indenture.

IN WITNESS WHEREOF, the Company has caused this Note to be duly executed.

PHOTRONICS, INC.

By: _____
Name:
Title:

Attest: _____
Name:
Title:
Date:

TRUSTEE'S CERTIFICATE OF AUTHENTICATION

This is one of the Notes described in the within-named Indenture.

THE BANK OF NOVA SCOTIA TRUST COMPANY OF NEW YORK, as
Trustee

By: _____
Authorized Officer
Name:
Title:

[AUTHENTICATING AGENT], ^{or} as Authenticating Agent

By: _____
Authorized Officer

FORM OF REVERSE OF NOTE

PHOTRONICS, INC.

4-3/4% CONVERTIBLE SUBORDINATED NOTE DUE 2006

This Note is one of a duly authorized issue of Notes of the Company, designated as its 4-3/4% Convertible Subordinated Notes due 2006 (herein called the "NOTES"), limited to the aggregate principal amount of \$200,000,000 all issued or to be issued under and pursuant to an Indenture dated as of December 12, 2001 (herein called the "INDENTURE"), between the Company and The Bank of Nova Scotia Trust Company of New York, as trustee (herein called the "TRUSTEE"), to which Indenture and all indentures supplemental thereto reference is hereby made for a description of the rights, limitations of rights, obligations, duties and immunities thereunder of the Trustee, the Company and the holders of the Notes.

In case an Event of Default (as defined in the Indenture) shall have occurred and be continuing, the principal of, premium, if any, and accrued interest on all Notes may be declared by either the Trustee or the holders of not less than 25% in aggregate principal amount of the Notes then outstanding, and upon said declaration shall become, due and payable, in the manner, with the effect and subject to the conditions provided in the Indenture.

The Indenture contains provisions permitting the Company and the Trustee, with the consent of the holders of not less than a majority in aggregate principal amount of the Notes at the time outstanding, to execute supplemental indentures adding any provisions to or changing in any manner or eliminating any of the provisions of the Indenture or of any supplemental indenture or modifying in any manner the rights of the holders of the Notes; provided that no such supplemental indenture shall (i) extend the fixed maturity of any Note, or reduce the rate or extend the time for payment of interest thereon, or reduce the principal amount thereof or premium, if any, thereon, or reduce any amount payable upon redemption thereof, or impair the right of any Noteholder to institute suit for the payment thereof, or make the principal thereof or interest or premium, if any, thereon payable in any coin or currency other than that provided in the Notes, or modify the provisions of the Indenture with respect to the subordination of the Notes in a manner adverse to the Noteholders in any material respect, or change the obligation of the Company to redeem any Note upon the happening of a Fundamental Change (as defined in the Indenture) in a manner adverse to the holder of the Notes, or impair the right to convert the Notes into Common Stock subject to the terms set forth in the Indenture, including Section 15.06 thereof, without the consent of the holder of each Note so affected or (ii) reduce the aforesaid percentage of Notes, the holders of which are required to consent to any

such supplemental indenture, reduce the quorum or voting requirements of the Indenture or change any obligation of the Company to maintain an office or agency in the places and for the purposes specified in the Indenture, without the consent of the holders of all Notes then outstanding. Subject to the provisions of the Indenture, the holders of a majority in aggregate principal amount of the Notes at the time outstanding may on behalf of the holders of all of the Notes waive any past default or Event of Default under the Indenture and its consequences except a default in the payment of interest or any premium on, or the principal of, any of the Notes, or a failure by the Company to convert any Notes into Common Stock of the Company, or a default in the payment of the redemption price pursuant to Article 3 of the Indenture, or a default in respect of a covenant or provisions of the Indenture which under Article 11 of the Indenture cannot be modified without the consent of the holders of each or all Notes then outstanding or affected thereby. Any such consent or waiver by the holder of this Note (unless revoked as provided in the Indenture) shall be conclusive and binding upon such holder and upon all future holders and owners of this Note and any Notes which may be issued in exchange or substitution hereof, irrespective of whether or not any notation thereof is made upon this Note or such other Notes.

The indebtedness evidenced by the Notes is, to the extent and in the manner provided in the Indenture, expressly subordinated and subject in right of payment to the prior payment in full of all Senior Indebtedness of the Company, whether outstanding at the date of the Indenture or thereafter incurred, and this Note is issued subject to the provisions of the Indenture with respect to such subordination. Each holder of this Note, by accepting the same, agrees to and shall be bound by such provisions and authorizes the Trustee on its behalf to take such action as may be necessary or appropriate to effectuate the subordination so provided and appoints the Trustee his attorney-in-fact for such purpose.

The indebtedness evidenced by the Notes is neither superior nor subordinated in right of payment to, and is *pari passu* with, the Company's 6.00% Convertible Subordinated Notes due June 1, 2004.

No reference herein to the Indenture and no provision of this Note or of the Indenture shall alter or impair the obligation of the Company, which is absolute and unconditional, to pay the principal of and any premium and interest on this Note at the place, at the respective times, at the rate and in the coin or currency herein prescribed.

Interest on the Notes shall be computed on the basis of a 360-day year of twelve 30-day months.

The Notes are issuable in fully registered form, without coupons, in denominations of \$1,000 principal amount and any integral multiple of \$1,000. At

the office or agency of the Company referred to on the face hereof, and in the manner and subject to the limitations provided in the Indenture, without payment of any service charge but with payment of a sum sufficient to cover any tax, assessment or other governmental charge that may be imposed in connection with any registration or exchange of Notes, Notes may be exchanged for a like aggregate principal amount of Notes of any other authorized denominations.

The Notes may be redeemed by the Company, in whole or in part, at any time prior to December 17, 2004 (a "PROVISIONAL REDEMPTION"), upon notice as set forth in the Indenture, at a redemption price equal to 100% of the principal amount of Notes to be redeemed, together with accrued and unpaid interest, if any, to but excluding the date fixed for redemption (the "PROVISIONAL REDEMPTION DATE") if (i) the Closing Price of the Common Stock shall have exceeded 150% of the Conversion Price then in effect for at least 20 Trading Days in any consecutive 30-Trading Day period ending on the Trading Day immediately preceding the date that the notice of the Provisional Redemption is first mailed pursuant to the Indenture and (ii) if the redemption would occur before December 12, 2003, the Shelf Registration Statement (as defined in the Registration Rights Agreement) covering resales of the Notes, and the Common Stock issuable upon conversion of the Notes, is effective and available for use and is expected to remain effective and available for use until the 30th day immediately following the Provisional Redemption Date.

Upon any such Provisional Redemption, the Company shall make an additional payment (the "ADDITIONAL PAYMENT") with respect to the Notes called for redemption to holders as of the Notice Date in an amount equal to the total aggregate amount of interest otherwise payable on the Notes from the last day through which interest was paid or duly provided for on the Notes, or December 12, 2001 if no interest has been paid or duly provided for, through December 17, 2004. The Company shall make the Additional Payment on all Notes called for Provisional Redemption, including any Notes converted into Common Stock pursuant to the terms hereof after the Notice Date and prior to the Provisional Redemption Date.

At any time on or after December 17, 2004, and prior to maturity, the Notes may be redeemed at the option of the Company, in whole or in part, upon mailing a notice of such redemption not less than 30 days but not more than 60 days before the date fixed for redemption to the holders of Notes at their last registered addresses, all as provided in the Indenture, at the following optional redemption prices (expressed as percentages of the principal amount), together in each case with accrued and unpaid interest to, but excluding, the date fixed for redemption:

If redeemed during the period beginning December 17, 2004 and ending on December 14, 2005, at a redemption price of 101.90%; if redeemed during the 12-month period beginning December 15, 2005 and ending on December 14, 2006, at a redemption price of 100.95%; and 100% if redeemed on or after December 15, 2006;

provided that if the date fixed for redemption is on a June 15 or December 15, then the interest payable on such date shall be paid to the holder of record on the preceding June 1 or December 1, respectively.

The Company may not give notice of any redemption of the Notes if a default in the payment of interest or premium, if any, on the Notes has occurred and is continuing.

The Notes are not subject to redemption through the operation of any sinking fund.

If a Fundamental Change occurs at any time prior to maturity of the Notes, the Notes will be redeemable on the 30th day after notice thereof (the "REPURCHASE DATE") at the option of the holder of the Notes at a redemption price equal to 100% of the principal amount thereof, together with accrued interest to, but excluding, the date of redemption; provided that, if such Repurchase Date is a June 15 or December 15, the interest payable on such date shall be paid to the holder of record of the Notes on the preceding June 1 or December 1, respectively. The Notes will be redeemable in multiples of \$1,000 principal amount. The Company shall mail to all holders of record of the Notes a notice of the occurrence of a Fundamental Change and of the redemption right arising as a result thereof on or before the 10th day after the occurrence of such Fundamental Change. For a Note to be so redeemed at the option of the holder, the Company must receive at the office or agency of the Company maintained for that purpose in accordance with the terms of the Indenture, such Note with the form entitled "Option to Elect Repayment Upon a Fundamental Change" on the reverse thereof duly completed, together with such Note, duly endorsed for transfer, on or before the 30th day after the date of such notice of a Fundamental Change (or if such 30th day is not a Business Day, the immediately succeeding Business Day).

Subject to the provisions of the Indenture, the holder hereof has the right, at its option, at any time after the original issuance of any Notes through the close of business on the final maturity date of the Notes, or, as to all or any portion hereof called for redemption, prior to the close of business on the Business Day immediately preceding the date fixed for redemption (unless the Company shall default in payment due upon redemption thereof), to convert each \$1,000 principal amount of the Notes into 27.027 shares of the Company's Common Stock (the

"CONVERSION RATE"), as such shares shall be constituted at the date of conversion and subject to adjustment from time to time as provided in the Indenture, upon surrender of this Note, together with a conversion notice as provided in the Indenture (the form entitled "CONVERSION NOTICE" on the reverse hereof), to the Company at the office or agency of the Company maintained for that purpose in accordance with the terms of the Indenture, or at the option of such holder, the Corporate Trust Office, and, unless the shares issuable on conversion are to be issued in the same name as this Note, duly endorsed by, or accompanied by instruments of transfer in form satisfactory to the Company duly executed by, the holder or by his duly authorized attorney.

No adjustment in respect of interest on any Note converted or dividends on any shares issued upon conversion of such Note will be made upon any conversion except as set forth in the next sentence. If this Note (or portion hereof) is surrendered for conversion during the period from the close of business on any record date for the payment of interest to the close of business on the Business Day preceding the following interest payment date and has not been called for redemption by the Company on a redemption date that occurs during such period, this Note (or portion hereof being converted) must be accompanied by payment, in immediately available funds or other funds acceptable to the Company, of an amount equal to the interest payable on such interest payment date on the principal amount being converted; provided that no such payment shall be required if there shall exist at the time of conversion a default in the payment of interest on the Notes.

No fractional shares will be issued upon any conversion, but an adjustment and payment in cash will be made, as provided in the Indenture, in respect of any fraction of a share which would otherwise be issuable upon the surrender of any Note or Notes for conversion.

A Note in respect of which a holder is exercising its right to require redemption upon a Fundamental Change may be converted only if such holder withdraws its election to exercise such right in accordance with the terms of the Indenture. Any Notes called for redemption, unless surrendered for conversion by the holders thereof on or before the close of business on the Business Day preceding the date fixed for redemption, may be deemed to be redeemed from the holders of such Notes for an amount equal to the applicable redemption price plus the Additional Payment, if any, together with accrued but unpaid interest to, but excluding, the date fixed for redemption, by one or more investment banks or other purchasers who may agree with the Company (i) to purchase such Notes from the holders thereof and convert them into shares of the Company's Common Stock and (ii) to make payment for such Notes as aforesaid to the Trustee in trust for the holders.

Upon due presentment for registration of transfer of this Note at the office or agency of the Company maintained for that purpose in accordance with the terms of the Indenture, a new Note or Notes of authorized denominations for an equal aggregate principal amount will be issued to the transferee in exchange thereof; subject to the limitations provided in the Indenture, without charge except for any tax, assessment or other governmental charge imposed in connection therewith.

The Company, the Trustee, any authenticating agent, any paying agent, any conversion agent and any Note registrar may deem and treat the registered holder hereof as the absolute owner of this Note (whether or not this Note shall be overdue and notwithstanding any notation of ownership or other writing hereon made by anyone other than the Company or any Note registrar) for the purpose of receiving payment hereof, or on account hereof, for the conversion hereof and for all other purposes, and neither the Company nor the Trustee nor any other authenticating agent nor any paying agent nor other conversion agent nor any Note registrar shall be affected by any notice to the contrary. All payments made to or upon the order of such registered holder shall, to the extent of the sum or sums paid, satisfy and discharge liability for monies payable on this Note.

No recourse for the payment of the principal of or any premium or interest on this Note, or for any claim based hereon or otherwise in respect hereof, and no recourse under or upon any obligation, covenant or agreement of the Company in the Indenture or any supplemental indenture or in any Note, or because of the creation of any indebtedness represented thereby, shall be had against any incorporator, stockholder, employee, agent, officer or director or subsidiary, as such, past, present or future, of the Company or of any successor corporation, either directly or through the Company or any successor corporation, whether by virtue of any constitution, statute or rule of law or by the enforcement of any assessment or penalty or otherwise, all such liability being, by acceptance hereof and as part of the consideration for the issue hereof, expressly waived and released.

This Note shall be deemed to be a contract made under the laws of New York, and for all purposes shall be construed in accordance with the laws of New York.

Terms used in this Note and defined in the Indenture are used herein as therein defined.

ABBREVIATIONS

The following abbreviations, when used in the inscription of the face of this Note, shall be construed as though they were written out in full according to applicable laws or regulations.

TEN COM - as tenants in common UNIF GIFT MIN ACT - ___ Custodian ___
TEN ENT - as tenant by the entirety (Cust) (Minor)
JT TEN - as joint tenants with right
 of survivorship and not as under Uniform Gifts to Minors Act
 tenants in common

(State)

Additional abbreviations may also be used though not in the above list.

CONVERSION NOTICE

TO: PHOTRONICS, INC.
THE BANK OF NOVA SCOTIA TRUST COMPANY OF NEW YORK

The undersigned registered owner of this Note hereby irrevocably exercises the option to convert this Note, or the portion thereof (which is \$1,000 or an integral multiple thereof) below designated, into shares of Common Stock of Photronics, Inc. in accordance with the terms of the Indenture referred to in this Note, and directs that the shares issuable and deliverable upon such conversion, together with any check in payment for fractional shares and any Notes representing any unconverted principal amount hereof, be issued and delivered to the registered holder hereof unless a different name has been indicated below. If shares or any portion of this Note not converted are to be issued in the name of a person other than the undersigned, the undersigned will provide the appropriate information below and pay all transfer taxes payable with respect thereto. Any amount required to be paid by the undersigned on account of interest accompanies this Note.

Dated: -----

Signature(s)

Signature(s) must be guaranteed by an "eligible guarantor institution" meeting the requirements of the Note registrar, which requirements include membership or participation in the Security Transfer Agent Medallion Program ("STAMP") or such other "signature guarantee program" as may be determined by the Note registrar in addition to, or in substitution for, STAMP, all in accordance with the Securities Exchange Act of 1934, as amended.

Signature Guarantee

Fill in the registration of shares of Common Stock if to be issued, and Notes if to be delivered, other than to and in the name of the registered holder:

(Name)

(Street Address)

(City, State and Zip Code)

- -----
Please print name and address

Principal amount to be converted (if less than all):

\$ -----

Social Security or Other Taxpayer
Identification Number:

- -----

OPTION TO ELECT REPAYMENT
UPON A FUNDAMENTAL CHANGE

TO: PHOTRONICS, INC.
THE BANK OF NOVA SCOTIA TRUST COMPANY OF NEW YORK

The undersigned registered owner of this Note hereby irrevocably acknowledges receipt of a notice from Photronics, Inc. (the "COMPANY") as to the occurrence of a Fundamental Change with respect to the Company and requests and instructs the Company to repay the entire principal amount of this Note, or the portion thereof (which is \$1,000 or an integral multiple thereof) below designated, in accordance with the terms of the Indenture referred to in this Note at the price of 100% of such entire principal amount or portion thereof, together with accrued interest to, but excluding, such repayment date, to the registered holder hereof.

Dated: -----

Signature(s)

NOTICE: The above signatures of the holder(s) hereof must correspond with the name as written upon the face of the Note in every particular without alteration or enlargement or any change whatever.

Principal amount to be repaid (if less than all):

\$ -----

Social Security or Other Taxpayer
Identification Number

ASSIGNMENT

For value received _____ hereby sell(s) assign(s) and transfer(s) unto _____ (Please insert social security or other Taxpayer Identification Number of assignee) the within Note, and hereby irrevocably constitutes and appoints _____ attorney to transfer said Note on the books of the Company, with full power of substitution in the premises.

In connection with any transfer of the Note prior to the expiration of the holding period applicable to sales thereof under Rule 144(k) under the Securities Act (or any successor provision) (other than any transfer pursuant to a registration statement that has been declared effective under the Securities Act), the undersigned confirms that such Note is being transferred:

- To Photronics, Inc. or a subsidiary thereof; or
- To a "qualified institutional buyer" in compliance with Rule 144A under the Securities Act of 1933, as amended; or
- Pursuant to and in compliance with Rule 144 under the Securities Act of 1933, as amended; or
- Pursuant to a Registration Statement which has been declared effective under the Securities Act of 1933, as amended, and which continues to be effective at the time of transfer;

and unless the Note has been transferred to Photronics, Inc. or a subsidiary thereof, box below is checked, the undersigned confirms that such Note is not being transferred to an "affiliate" of the Company as defined in Rule 144 under the Securities Act of 1933, as amended (an "AFFILIATE").

Dated: _____

Signature(s)

Signature(s) must be guaranteed by an "eligible guarantor institution" meeting the requirements of the Note registrar, which requirements include membership or participation in the

Security Transfer Agent Medallion Program ("STAMP") or such other "signature guarantee program" as may be determined by the Note registrar in addition to, or in substitution for, STAMP, all in accordance with the Securities Exchange Act of 1934, as amended.

Signature Guarantee

NOTICE: The signature of the conversion notice, the option to elect repayment upon a Fundamental Change or the assignment must correspond with the name as written upon the face of the Note in every particular without alteration or enlargement or any change whatever.

REGISTRATION RIGHTS AGREEMENT

AMONG

PHOTRONICS, INC.

AS ISSUER,

AND

MORGAN STANLEY & CO. INCORPORATED

AND

MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED

AS INITIAL PURCHASERS

DATED AS OF DECEMBER 12, 2001

REGISTRATION RIGHTS AGREEMENT dated as of December 12, 2001 among Photronics, Inc., a Connecticut corporation (the "COMPANY"), and Morgan Stanley & Co. Incorporated and Merrill Lynch, Pierce, Fenner & Smith Incorporated (the "INITIAL PURCHASERS") pursuant to the Purchase Agreement dated December 6, 2001 (the "PURCHASE AGREEMENT"), between the Company and the Initial Purchasers. In order to induce the Initial Purchasers to enter into the Purchase Agreement, the Company has agreed to provide the registration rights set forth in this Agreement. The execution of this Agreement is a condition to the closing under the Purchase Agreement.

The Company agrees with the Initial Purchasers, (i) for their benefit as Initial Purchasers and (ii) for the benefit of the beneficial owners (including the Initial Purchasers) from time to time of the Notes (as defined herein) and the beneficial owners from time to time of the Underlying Common Stock (as defined herein) issued upon conversion of the Notes (each of the foregoing a "HOLDER" and together the "HOLDERS"), as follows:

SECTION 1. Definitions. Capitalized terms used herein without definition shall have their respective meanings set forth in the Purchase Agreement. As used in this Agreement, the following terms shall have the following meanings:

"AFFILIATE" means with respect to any specified person, an "affiliate," as defined in Rule 144, of such person.

"AMENDMENT EFFECTIVENESS DEADLINE DATE" has the meaning set forth in Section 2(d) hereof.

"BUSINESS DAY" means each Monday, Tuesday, Wednesday, Thursday and Friday that is not a day on which banking institutions in The City of New York are authorized or obligated by law or executive order to close.

"COMMON STOCK" means the shares of common stock, without par value, of the Company and any other shares of common stock as may constitute "Common Stock" for purposes of the Indenture, including the Underlying Common Stock.

"CONVERSION PRICE" has the meaning assigned such term in the Indenture.

"DAMAGES ACCRUAL PERIOD" has the meaning set forth in Section 2(e) hereof.

"DAMAGES PAYMENT DATE" means each June 15 and December 15.

"DEFERRAL NOTICE" has the meaning set forth in Section 3(i) hereof.

"DEFERRAL PERIOD" has the meaning set forth in Section 3(i) hereof.

"EFFECTIVENESS DEADLINE DATE" has the meaning set forth in Section 2(a) hereof.

"EFFECTIVENESS PERIOD" means the period commencing on the date hereof and ending on the date that all Registrable Securities have ceased to be Registrable Securities.

"EVENT" has the meaning set forth in Section 2(e) hereof.

"EVENT DATE" has the meaning set forth in Section 2(e) hereof.

"EVENT TERMINATION DATE" has the meaning set forth in Section 2(e) hereof.

"EXCHANGE ACT" means the Securities Exchange Act of 1934, as amended, and the rules and regulations of the SEC promulgated thereunder.

"FILING DEADLINE DATE" has the meaning set forth in Section 2(a) hereof.

"HOLDER" has the meaning set forth in the second paragraph of this Agreement.

"INDENTURE" means the Indenture, dated as of December 12, 2001, between the Company and The Bank of Nova Scotia Trust Company of New York, as trustee, pursuant to which the Notes are being issued.

"INITIAL PURCHASERS" means Morgan Stanley & Co. Incorporated and Merrill Lynch, Pierce, Fenner & Smith Incorporated.

"INITIAL SHELF REGISTRATION STATEMENT" has the meaning set forth in Section 2(a) hereof.

"ISSUE DATE" means the first date of original issuance of the Notes.

"LIQUIDATED DAMAGES AMOUNT" has the meaning set forth in Section 2(e) hereof.

"LOSSES" has the meaning set forth in Section 6 hereof.

"MATERIAL EVENT" has the meaning set forth in Section 3(i) hereof.

"NOTES" means the 43/4% Convertible Subordinated Notes Due 2006 of the Company to be purchased pursuant to the Purchase Agreement.

"NOTICE AND QUESTIONNAIRE" means a written notice delivered to the Company containing substantially the information called for by the Selling Securityholder Notice and Questionnaire attached as Annex A to the Offering Memorandum of the Company issued December 6, 2001 relating to the Notes.

"NOTICE HOLDER" means, on any date, any Holder that has delivered a Notice and Questionnaire to the Company on or prior to such date.

"PURCHASE AGREEMENT" has the meaning set forth in the preamble hereof.

"PROSPECTUS" means the prospectus included in any Registration Statement (including, without limitation, a prospectus that discloses information previously omitted from a prospectus filed as part of an effective registration statement in reliance upon Rule 430A promulgated under the Securities Act), as amended or supplemented by any amendment or prospectus supplement, including post-effective amendments, and all materials incorporated by reference or explicitly deemed to be incorporated by reference in such Prospectus.

"RECORD HOLDER" means with respect to any Damages Payment Date relating to any Notes or Underlying Common Stock as to which any Liquidated Damages Amount has accrued, the registered holder of such Note or Underlying Common Stock on the June 1 immediately preceding a Damages Payment Date occurring on a June 15, and on the December 1 immediately preceding a Damages Payment Date occurring on a December 15.

"REGISTRABLE SECURITIES" means the Notes until such Notes have been converted into or exchanged for the Underlying Common Stock and, at all times subsequent to any such conversion or exchange the Underlying Common Stock and any securities into or for which such Underlying Common Stock has been converted or exchanged, and any security issued with respect thereto upon any stock dividend, split or similar event until, in the case of any such security, (A) the earliest of (i) its effective registration under the Securities Act and resale in accordance with the Registration Statement covering it, (ii) expiration of the holding period that would be applicable thereto, under Rule 144(k) or (iii) its sale to the public pursuant to Rule 144 (or any similar provision then in force, but not Rule 144A) under the Securities Act, and (B) as a result of the event or circumstance described in any of the foregoing clauses (i) through (iii), the legend with respect to transfer restrictions required under the Indenture are removed or removable in accordance with the terms of the Indenture or such legend, as the case may be.

"REGISTRATION EXPENSES" has the meaning set forth in Section 5 hereof.

"REGISTRATION STATEMENT" means any registration statement of the Company that covers any of the Registrable Securities pursuant to the provisions of this Agreement including the Prospectus, amendments and supplements to such registration statement, including post-effective amendments, all exhibits, and all materials incorporated by reference or explicitly deemed to be incorporated by reference in such registration statement.

"RESTRICTED SECURITIES" means "Restricted Securities" as defined in Rule 144.

"RULE 144" means Rule 144 under the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the SEC.

"RULE 144A" means Rule 144A under the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the SEC.

"SEC" means the Securities and Exchange Commission.

"SECURITIES ACT" means the Securities Act of 1933, as amended, and the rules and regulations promulgated by the SEC thereunder.

"SHELF REGISTRATION STATEMENT" has the meaning set forth in Section 2(a) hereof.

"SPECIAL COUNSEL" means Davis Polk & Wardwell or one such other successor counsel as shall be specified by the Holders of a majority of the Registrable Securities, but which may, with the written consent of the Initial Purchasers (which shall not be unreasonably withheld), be another nationally recognized law firm experienced in securities law matters designated by the Company, the reasonable fees and expenses of which will be paid by the Company pursuant to Section 5 hereof. For purposes of determining the holders of a majority of the Registrable Securities in this definition, Holders of Notes shall be deemed to be the Holders of the number of shares of Underlying Common Stock into which such Notes are or would be convertible as of the date the consent is requested.

"SUBSEQUENT SHELF REGISTRATION STATEMENT" has the meaning set forth in Section 2(b) hereof.

"TIA" means the Trust Indenture Act of 1939, as amended.

"TRUSTEE" means The Bank of Nova Scotia Trust Company of New York, the Trustee under the Indenture.

"UNDERLYING COMMON STOCK" means the Common Stock into which the Notes are convertible or issued upon any such conversion.

SECTION 2. Shelf Registration. (a) The Company shall prepare and file or cause to be prepared and filed with the SEC, as soon as practicable but in any event by the date (the "FILING DEADLINE DATE") ninety (90) days after the Issue Date, a Registration Statement for an offering to be made on a delayed or continuous basis pursuant to Rule 415 of the Securities Act (a "SHELF REGISTRATION STATEMENT") registering the resale from time to time by Holders thereof of all of the Registrable Securities (the "INITIAL SHELF REGISTRATION STATEMENT"). The Initial Shelf Registration Statement shall be on Form S-3 or another appropriate form permitting registration of such Registrable Securities for resale by such Holders in accordance with the methods of distribution elected by the Holders and set forth in the Initial Shelf Registration Statement. The Company shall use its reasonable best efforts to cause the Initial Shelf Registration Statement to be declared effective under the Securities Act as promptly as is practicable but in any event by the date (the "EFFECTIVENESS DEADLINE DATE") that is one hundred eighty (180) days after the Issue Date, and to keep the Initial Shelf Registration Statement (or any Subsequent Shelf Registration Statement) continuously effective under the Securities Act until the expiration of the Effectiveness Period. At the time the Initial Shelf Registration Statement is declared effective, each Holder that became a Notice Holder on or prior to the date ten (10) Business Days prior to such time of effectiveness shall be named as a selling securityholder in the Initial Shelf Registration Statement and the related Prospectus in such a manner as to permit such Holder to

deliver such Prospectus to purchasers of Registrable Securities in accordance with applicable law. None of the Company's security holders (other than the Holders of Registrable Securities) shall have the right to include any of the Company's securities in the Shelf Registration Statement.

(b) If the Initial Shelf Registration Statement or any Subsequent Shelf Registration Statement ceases to be effective for any reason at any time during the Effectiveness Period (other than because all Registrable Securities registered thereunder shall have been resold pursuant thereto or shall have otherwise ceased to be Registrable Securities), the Company shall use its reasonable best efforts to obtain the prompt withdrawal of any order suspending the effectiveness thereof, and in any event shall within thirty (30) days of such cessation of effectiveness amend the Shelf Registration Statement in a manner reasonably expected to obtain the withdrawal of the order suspending the effectiveness thereof, or file an additional Shelf Registration Statement covering all of the securities that as of the date of such filing are Registrable Securities (a "SUBSEQUENT SHELF REGISTRATION STATEMENT"). If a Subsequent Shelf Registration Statement is filed, the Company shall use its reasonable best efforts to cause the Subsequent Shelf Registration Statement to become effective as promptly as is practicable after such filing and to keep such Registration Statement (or subsequent Shelf Registration Statement) continuously effective until the end of the Effectiveness Period.

(c) The Company shall supplement and amend the Shelf Registration Statement if required by the rules, regulations or instructions applicable to the registration form used by the Company for such Shelf Registration Statement, if required by the Securities Act or as reasonably requested by the Initial Purchasers or by the Trustee on behalf of the Holders of the Registrable Securities covered by such Shelf Registration Statement.

(d) Each Holder agrees that if such Holder wishes to sell Registrable Securities pursuant to a Shelf Registration Statement and related Prospectus, it will do so only in accordance with this Section 2(d) and Section 3(i). Each Holder wishing to sell Registrable Securities pursuant to a Shelf Registration Statement and related Prospectus agrees to deliver a Notice and Questionnaire to the Company at least three (3) Business Days prior to any intended distribution of Registrable Securities under the Shelf Registration Statement. From and after the date the Initial Shelf Registration Statement is declared effective, the Company shall, as promptly as practicable after the date a Notice and Questionnaire is delivered, and in any event upon the later of (x) five (5) Business Days after such date or (y) five (5) Business Days after the expiration of any Deferral Period in effect when the Notice and Questionnaire is delivered or put into effect within five (5) Business Days of such delivery date:

(i) if required by applicable law, file with the SEC a post-effective amendment to the Shelf Registration Statement or prepare and, if required by applicable law, file a supplement to the related Prospectus or a supplement or amendment to any document incorporated therein by reference or file any other required document so that the Holder delivering such Notice and Questionnaire is named as a selling securityholder

in the Shelf Registration Statement and the related Prospectus in such a manner as to permit such Holder to deliver such Prospectus to purchasers of the Registrable Securities in accordance with applicable law and, if the Company shall file a post-effective amendment to the Shelf Registration Statement, use its reasonable best efforts to cause such post-effective amendment to be declared effective under the Securities Act as promptly as is practicable, but in any event by the date (the "AMENDMENT EFFECTIVENESS DEADLINE DATE") that is forty-five (45) days after the date such post-effective amendment is required by this clause to be filed;

(ii) provide such Holder copies of any documents filed pursuant to Section 2(d)(i); and

(iii) notify such Holder as promptly as practicable after the effectiveness under the Securities Act of any post-effective amendment filed pursuant to Section 2(d)(i);

provided that if such Notice and Questionnaire is delivered during a Deferral Period, the Company shall so inform the Holder delivering such Notice and Questionnaire and shall take the actions set forth in clauses (i), (ii) and (iii) above upon expiration of the Deferral Period in accordance with Section 3(i). Notwithstanding anything contained herein to the contrary, (i) the Company shall be under no obligation to name any Holder that is not a Notice Holder as a selling securityholder in any Registration Statement or related Prospectus and (ii) the Amendment Effectiveness Deadline Date shall be extended by up to ten (10) Business Days from the expiration of a Deferral Period (and the Company shall incur no obligation to pay Liquidated Damages during such extension) if such Deferral Period shall be in effect on the Amendment Effectiveness Deadline Date.

(e) The parties hereto agree that the Holders of Registrable Securities will suffer damages, and that it would not be feasible to ascertain the extent of such damages with precision, if

(i) the Initial Shelf Registration Statement has not been filed on or prior to the Filing Deadline Date,

(ii) the Initial Shelf Registration Statement has not been declared effective under the Securities Act on or prior to the Effectiveness Deadline Date,

(iii) the Company has failed to perform its obligations set forth in Section 2(d) within the time period required therein,

(iv) any post-effective amendment to a Shelf Registration Statement filed pursuant to Section 2(d)(i) has not become effective under the Securities Act on or prior to the Amendment Effectiveness Deadline Date,

(v) the aggregate duration of Deferral Periods in any period exceeds the number of days permitted in respect of such period pursuant to Section 3(i) hereof or

(vi) the number of Deferral Periods in any period exceeds the number permitted in respect of such period pursuant to Section 3(i) hereof

Each event described in any of the foregoing clauses (i) through (vi) is individually referred to herein as an "EVENT." For purposes of this Agreement, each Event set forth above shall begin and end on the dates set forth in the table set forth below:

Type of Event by Clause -----	Beginning Date -----	Ending Date -----
(i)	Filing Deadline Date	the date the Initial Shelf Registration Statement is filed
(ii)	Effectiveness Deadline Date	the date the Initial Shelf Registration Statement becomes effective under the Securities Act
(iii)	the date by which the Company is required to perform its obligations under Section 2(d)	the date the Company performs its obligations set forth in Section 2(d)
(iv)	the Amendment Effectiveness Deadline Date	the date the applicable post-effective amendment to a Shelf Registration Statement becomes effective under the Securities Act
(v)	the date on which the aggregate duration of Deferral Periods in any period exceeds the number of days permitted by Section 3(i)	termination of the Deferral Period that caused the limit on the aggregate duration of Deferral Periods to be exceeded
(vi)	the date of commencement of a Deferral Period that causes the number of Deferral Periods to exceed	termination of the Deferral Period that caused the number of Deferral Periods to exceed the number

Type of Event by Clause -----	Beginning Date -----	Ending Date -----
	the number permitted by Section 3(i)	permitted by Section 3(i)

For purposes of this Agreement, Events shall begin on the dates set forth in the table above and shall continue until the ending dates set forth in the table above.

Commencing on (and including) any date that an Event has begun and ending on (but excluding) the next date on which there are no Events that have occurred and are continuing (a "DAMAGES ACCRUAL PERIOD"), the Company shall pay, as liquidated damages and not as a penalty, to Record Holders of Registrable Securities an amount (the "LIQUIDATED DAMAGES AMOUNT") accruing, for each day in the Damages Accrual Period, (i) in respect of any Note, at a rate per annum equal to 0.5% of the aggregate principal amount of such Note and (ii) in respect of each share of Underlying Common Stock at a rate per annum equal to 0.5% on the Conversion Price on such date; provided that in the case of a Damages Accrual Period that is in effect solely as a result of an Event of the type described in clause (iii) or (iv) of the preceding paragraph, such Liquidated Damages Amount shall be paid only to the Holders (as set forth in the succeeding paragraph) that have delivered Notices and Questionnaires that caused the Company to incur the obligations set forth in Section 2(d) the non-performance of which is the basis of such Event. In calculating the Liquidated Damages Amount on any date on which no Notes are outstanding, the Conversion Price and the Liquidated Damages Amount shall be calculated as if the Notes were still outstanding. Notwithstanding the foregoing, no Liquidated Damages Amount shall accrue as to any Registrable Security from and after the earlier of (x) the date such security is no longer a Registrable Security and (y) expiration of the Effectiveness Period. The rate of accrual of the Liquidated Damages Amount with respect to any period shall not exceed the rate provided for in this paragraph notwithstanding the occurrence of multiple concurrent Events.

The Liquidated Damages Amount shall accrue from the first day of the applicable Damages Accrual Period, and shall be payable on each Damages Payment Date during the Damage Accrual Period (and on the Damages Payment Date next succeeding the end of the Damages Accrual Period if the Damage Accrual Period does not end on a Damages Payment Date) to the Record Holders of the Registrable Securities entitled thereto; provided that any Liquidated Damages Amount accrued with respect to any Note or portion thereof redeemed by the Company on a redemption date or converted into Underlying Common Stock on a conversion date prior to the Damages Payment Date, shall, in any such event, be paid instead to the Holder who submitted such Note or portion thereof for redemption or conversion on the applicable redemption date or conversion date, as the case may be, on such date (or promptly following the conversion date, in the case of conversion); provided further, that, in the case of an Event of the type described in clause (iii) or (iv) of the first paragraph of this Section 2(e), such Liquidated Damages Amount shall be paid only to the Holders entitled thereto pursuant to such first

paragraph by check mailed to the address set forth in the Notice and Questionnaire delivered by such Holder. The Trustee shall be entitled, on behalf of registered holders of Notes or Underlying Common Stock, to seek any available remedy for the enforcement of this Agreement, including for the payment of such Liquidated Damages Amount. Notwithstanding the foregoing, the parties agree that the sole damages payable for a violation of the terms of this Agreement with respect to which liquidated damages are expressly provided shall be such liquidated damages. Nothing shall preclude any Holder from pursuing or obtaining specific performance or other equitable relief with respect to this Agreement.

All of the Company's obligations set forth in this Section 2(e) that are outstanding with respect to any Registrable Security at the time such security ceases to be a Registrable Security shall survive until such time as all such obligations with respect to such security have been satisfied in full (notwithstanding termination of this Agreement pursuant to Section 8(k)).

The parties hereto agree that the liquidated damages provided for in this Section 2(e) constitute a reasonable estimate of the damages that may be incurred by Holders of Registrable Securities by reason of the failure of a Shelf Registration Statement to be filed or declared effective or available for effecting resales of Registrable Securities in accordance with the provisions hereof.

SECTION 3. Registration Procedures. In connection with the registration obligations of the Company under Section 2 hereof, the Company shall:

(a) Prepare and file with the SEC a Registration Statement or Registration Statements on any appropriate form under the Securities Act available for the sale of the Registrable Securities by the Holders thereof in accordance with the intended method or methods of distribution thereof, and use its reasonable best efforts to cause each such Registration Statement to become effective and remain effective as provided herein; provided that before filing any Registration Statement or Prospectus or any amendments or supplements thereto with the SEC, furnish to the Initial Purchasers and the Special Counsel of such offering, if any, copies of all such documents proposed to be filed and use its reasonable best efforts to reflect in each such document when so filed with the SEC such comments as the Initial Purchasers or the Special Counsel, if any, reasonably shall propose within five (5) Business Days of the delivery of such copies to the Initial Purchasers and the Special Counsel.

(b) Prepare and file with the SEC such amendments and post-effective amendments to each Registration Statement as may be necessary to keep such Registration Statement continuously effective for the applicable period specified in Section 2(a); cause the related Prospectus to be supplemented by any required prospectus supplement, and as so supplemented to be filed pursuant to Rule 424 (or any similar provisions then in force) under the Securities Act; and use its reasonable best efforts to comply with the provisions of the Securities Act applicable to it with respect to the disposition of all securities covered by such Registration Statement during the

Effectiveness Period in accordance with the intended methods of disposition by the sellers thereof set forth in such Registration Statement as so amended or such Prospectus as so supplemented.

(c) As promptly as practicable give notice to the Notice Holders, the Initial Purchasers and the Special Counsel, (i) when any Prospectus, prospectus supplement, Registration Statement or post-effective amendment to a Registration Statement has been filed with the SEC and, with respect to a Registration Statement or any post-effective amendment, when the same has been declared effective, (ii) of any request, following the effectiveness of the Initial Shelf Registration Statement under the Securities Act, by the SEC or any other federal or state governmental authority for amendments or supplements to any Registration Statement or related Prospectus or for additional information, (iii) of the issuance by the SEC or any other federal or state governmental authority of any stop order suspending the effectiveness of any Registration Statement or the initiation or threatening of any proceedings for that purpose, (iv) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Registrable Securities for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose, (v) of the occurrence of a Material Event and (vi) of the determination by the Company that a post-effective amendment to a Registration Statement will be filed with the SEC, which notice may, at the discretion of the Company (or as required pursuant to Section 3 (i)), state that it constitutes a Deferral Notice, in which event the provisions of Section 3(i) shall apply.

(d) Use its reasonable best efforts to obtain the withdrawal of any order suspending the effectiveness of a Registration Statement or the lifting of any suspension of the qualification (or exemption from qualification) of any of the Registrable Securities for sale in any jurisdiction in which they have been qualified for sale, in either case at the earliest possible moment, and provide immediate notice to each Notice Holder and the Initial Purchasers of the withdrawal of any such order.

(e) If reasonably requested by the Initial Purchasers or any Notice Holder, as promptly as practicable incorporate in a prospectus supplement or post-effective amendment to a Registration Statement such information as the Initial Purchasers and the Special Counsel, or such Notice Holder shall on the basis of an opinion of nationally-recognized counsel experienced in such matters, determine to be required to be included therein by applicable law and make any required filings of such prospectus supplement or post-effective amendment.

(f) As promptly as practicable furnish to each Notice Holder, the Special Counsel and the Initial Purchasers, without charge, at least one (1) conformed copy of the Registration Statement and any amendment thereto, including exhibits and all documents incorporated or deemed to be incorporated therein by reference.

(g) During the Effectiveness Period, deliver to each Notice Holder, the Special Counsel, if any, and the Initial Purchasers, in connection with any sale of Registrable Securities pursuant to a Registration Statement, without charge, as many copies of the Prospectus or Prospectuses relating to such Registrable Securities (including each preliminary prospectus) and any amendment or supplement thereto as such Notice Holder may reasonably request; and the Company hereby consents (except during such periods that a Deferral Notice is outstanding and has not been revoked) to the use of such Prospectus or each amendment or supplement thereto by each Notice Holder in connection with any offering and sale of the Registrable Securities covered by such Prospectus or any amendment or supplement thereto in the manner set forth therein.

(h) Prior to any public offering of the Registrable Securities pursuant to a Registration Statement, use its reasonable best efforts to register or qualify or cooperate with the Notice Holders and the Special Counsel in connection with the registration or qualification (or exemption from such registration or qualification) of such Registrable Securities for offer and sale under the securities or Blue Sky laws of such jurisdictions within the United States as any Notice Holder reasonably requests in writing (which request may be included in the Notice and Questionnaire); prior to any public offering of the Registrable Securities pursuant to the Shelf Registration Statement, use its reasonable best efforts to keep each such registration or qualification (or exemption therefrom) effective during the Effectiveness Period in connection with such Notice Holder's offer and sale of Registrable Securities pursuant to such registration or qualification (or exemption therefrom) and do any and all other acts or things reasonably necessary or advisable to enable the disposition in such jurisdictions of such Registrable Securities in the manner set forth in the relevant Registration Statement and the related Prospectus; provided that the Company will not be required to (i) qualify as a foreign corporation or as a dealer in securities in any jurisdiction where it would not otherwise be required to qualify but for this Agreement or (ii) take any action that would subject it to general service of process in suits or to taxation in any such jurisdiction where it is not then so subject.

(i) Upon (A) the issuance by the SEC of a stop order suspending the effectiveness of the Shelf Registration Statement or the initiation of proceedings with respect to the Shelf Registration Statement under Section 8(d) or 8(e) of the Securities Act, (B) the occurrence of any event or the existence of any fact (a "MATERIAL EVENT") as a result of which any Registration Statement shall contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading, or any Prospectus shall contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, or (C) the occurrence or existence of any pending corporate development that, in the reasonable discretion of the Company, makes it

appropriate to suspend the availability of the Shelf Registration Statement and the related Prospectus for a discrete period of time:

(i) in the case of clause (B) above, subject to the next sentence, as promptly as practicable prepare and file, if necessary pursuant to applicable law, a post-effective amendment to such Registration Statement or a supplement to the related Prospectus or any document incorporated therein by reference or file any other required document that would be incorporated by reference into such Registration Statement and Prospectus so that such Registration Statement does not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading, and such Prospectus does not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, as thereafter delivered to the purchasers of the Registrable Securities being sold thereunder, and, in the case of a post-effective amendment to a Registration Statement, subject to the next sentence, use its reasonable best efforts to cause it to be declared effective as promptly as is practicable, and

(ii) give notice to the Notice Holders, and the Special Counsel, if any, that the availability of the Shelf Registration Statement is suspended (a "DEFERRAL NOTICE") and, upon receipt of any Deferral Notice, each Notice Holder agrees not to sell any Registrable Securities pursuant to the Registration Statement until such Notice Holder's receipt of copies of the supplemented or amended Prospectus provided for in clause (i) above, or until it is advised in writing by the Company that the Prospectus may be used, and has received copies of any additional or supplemental filings that are incorporated or deemed incorporated by reference in such Prospectus.

The Company will use its reasonable best efforts to ensure that the use of the Prospectus may be resumed (x) in the case of clause (A) above, as promptly as is practicable, (y) in the case of clause (B) above, as soon as, in the sole judgment of the Company, public disclosure of such Material Event would not be prejudicial to or contrary to the interests of the Company or, if necessary to avoid unreasonable burden or expense, as soon as practicable thereafter and (z) in the case of clause (C) above, as soon as in the reasonable discretion of the Company, such suspension is no longer appropriate. The Company shall be entitled to exercise its right under this Section 3(i) to suspend the availability of the Shelf Registration Statement or any Prospectus, without incurring or accruing any obligation to pay liquidated damages pursuant to Section 2(e), no more than one (1) time in any three month period or three (3) times in any twelve month period, and any such period during which the availability of the Registration Statement and any Prospectus is suspended (the "DEFERRAL PERIOD") shall, without incurring any obligation

to pay liquidated damages pursuant to Section 2(e), not exceed 30 days; provided that the aggregate duration of any Deferral Periods shall not exceed 30 days in any three month period (or 60 days in any three month period in the event of a Material Event pursuant to which the Company has delivered a second notice as required below) or 90 days in any twelve (12) month period; provided that in the case of a Material Event relating to an acquisition or a probable acquisition or financing, recapitalization, business combination or other similar transaction, the Company may, without incurring any obligation to pay liquidated damages pursuant to Section 2(e), deliver to Notice Holders a second notice to the effect set forth above, which shall have the effect of extending the Deferral Period by up to an additional 30 days, or such shorter period of time as is specified in such second notice.

(j) If requested in writing in connection with a disposition of Registrable Securities pursuant to a Registration Statement, make reasonably available for inspection during normal business hours by a representative for the Notice Holders of such Registrable Securities, any broker-dealers, attorneys and accountants retained by such Notice Holders, and any attorneys or other agents retained by a broker-dealer engaged by such Notice Holders, all relevant financial and other records and pertinent corporate documents and properties of the Company and its subsidiaries, and cause the appropriate officers, directors and employees of the Company and its subsidiaries to make reasonably available for inspection during normal business hours on reasonable notice all relevant information reasonably requested by such representative for the Notice Holders, or any such broker-dealers, attorneys or accountants in connection with such disposition, in each case as is customary for similar "DUE DILIGENCE" examinations; provided that such persons shall first agree in writing with the Company that any information that is reasonably and in good faith designated by the Company in writing as confidential at the time of delivery of such information shall be kept confidential by such persons and shall be used solely for the purposes of exercising rights under this Agreement, unless (i) disclosure of such information is required by court or administrative order or is necessary to respond to inquiries of regulatory authorities, (ii) disclosure of such information is required by law (including any disclosure requirements pursuant to federal securities laws in connection with the filing of any Registration Statement or the use of any prospectus referred to in this Agreement), (iii) such information becomes generally available to the public other than as a result of a disclosure or failure to safeguard by any such person or (iv) such information becomes available to any such person from a source other than the Company and such source is not bound by a confidentiality agreement, and provided further that the foregoing inspection and information gathering shall, to the greatest extent possible, be coordinated on behalf of all the Notice Holders and the other parties entitled thereto by the Special Counsel.

(k) Comply with all applicable rules and regulations of the SEC and make generally available to its securityholders earning statements (which need not be audited) satisfying the provisions of Section 11(a) of the Securities Act and Rule 158 thereunder

(or any similar rule promulgated under the Securities Act) for a 12-month period commencing on the first day of the first fiscal quarter of the Company commencing after the effective date of a Registration Statement, which statements shall be made available no later than 45 days after the end of the 12-month period or 90 days if the 12-month period coincides with a fiscal year of the Company.

(l) Cooperate with each Notice Holder to facilitate the timely preparation and delivery of certificates representing Registrable Securities sold or to be sold pursuant to a Registration Statement, which certificates shall not bear any restrictive legends, and cause such Registrable Securities to be in such denominations as are permitted by the Indenture and registered in such names as such Notice Holder may request in writing at least one (1) Business Day prior to any sale of such Registrable Securities.

(m) Provide a CUSIP number for all Registrable Securities covered by each Registration Statement not later than the effective date of such Registration Statement and provide the Trustee and the transfer agent for the Common Stock with printed certificates for the Registrable Securities that are in a form eligible for deposit with The Depository Trust Company.

(n) Cooperate and assist in any filings required to be made with the National Association of Securities Dealers, Inc.

(o) Upon (i) the filing of the Initial Shelf Registration Statement and (ii) the effectiveness of the Initial Shelf Registration Statement, announce the same, in each case by release to Reuters Economic Services and Bloomberg Business News.

SECTION 4. Holder's Obligations. Each Holder agrees, by acquisition of the Registrable Securities, that no Holder shall be entitled to sell any of such Registrable Securities pursuant to a Registration Statement or to receive a Prospectus relating thereto, unless such Holder has furnished the Company with a Notice and Questionnaire as required pursuant to Section 2(d) hereof (including the information required to be included in such Notice and Questionnaire) and the information set forth in the next sentence. Each Notice Holder agrees promptly to furnish to the Company all information required to be disclosed in order to make the information previously furnished to the Company by such Notice Holder not misleading and any other information regarding such Notice Holder and the distribution of such Registrable Securities as the Company may from time to time reasonably request. Any sale of any Registrable Securities by any Holder shall constitute a representation and warranty by such Holder that the information relating to such Holder and its plan of distribution is as set forth in the Prospectus delivered by such Holder in connection with such disposition, that such Prospectus does not as of the time of such sale contain any untrue statement of a material fact relating to or provided by such Holder or its plan of distribution and that such Prospectus does not as of the time of such sale omit to state any material fact relating to or provided by such Holder or its plan of distribution necessary to

make the statements in such Prospectus, in the light of the circumstances under which they were made, not misleading.

SECTION 5. Registration Expenses. The Company shall bear all fees and expenses incurred in connection with the performance by the Company of its obligations under Sections 2 and 3 of this Agreement whether or not any Registration Statement is declared effective. Such fees and expenses shall include, without limitation, (i) all registration and filing fees (including, without limitation, fees and expenses (x) with respect to filings required to be made with the National Association of Securities Dealers, Inc. and (y) of compliance with federal and state securities or Blue Sky laws (including, without limitation, reasonable fees and disbursements of the Special Counsel in connection with Blue Sky qualifications of the Registrable Securities under the laws of such jurisdictions as Notice Holders of a majority of the Registrable Securities being sold pursuant to a Registration Statement may designate), (ii) printing expenses (including, without limitation, expenses of printing certificates for Registrable Securities in a form eligible for deposit with The Depository Trust Company), (iii) duplication expenses relating to copies of any Registration Statement or Prospectus delivered to any Holders hereunder, (iv) fees and disbursements of counsel for the Company and the Special Counsel in connection with the Shelf Registration Statement (provided that the Company shall not be liable for the fees and expenses of more than one separate firm for all parties participating in any transaction hereunder), (v) reasonable fees and disbursements of the Trustee and its counsel and of the registrar and transfer agent for the Common Stock and (vi) Securities Act liability insurance obtained by the Company in its sole discretion. In addition, the Company shall pay the internal expenses of the Company (including, without limitation, all salaries and expenses of officers and employees performing legal or accounting duties), the expense of any annual audit, the fees and expenses incurred in connection with the listing by the Company of the Registrable Securities on any securities exchange on which similar securities of the Company are then listed and the fees and expenses of any person, including special experts, retained by the Company. Notwithstanding the provisions of this Section 5, each seller of Registrable Securities shall pay selling expenses and all registration expenses to the extent required by applicable law.

SECTION 6. Indemnification.

(a) Indemnification by the Company. The Company shall indemnify and hold harmless each Notice Holder and each person, if any, who controls any Notice Holder (within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act) from and against any losses, liabilities, claims, damages and expenses (including, without limitation, any legal or other expenses reasonably incurred in connection with defending or investigating any such action or claim) (collectively, "LOSSES"), arising out of or based upon any untrue statement or alleged untrue statement of a material fact contained in any Registration Statement or Prospectus or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or based upon any omission or alleged

omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, provided that the Company shall not be liable in any such case to the extent that any such Losses arise out of or are based upon an untrue statement or alleged untrue statement contained in or omission or alleged omission from any of such documents in reliance upon and conformity with any of the information relating to the Holders furnished to the Company in writing by a Holder expressly for use therein; provided further, that the indemnification contained in this paragraph shall not inure to the benefit of any Holder (or to the benefit of any person controlling such Holder) on account of any such Losses arising out of or based upon an untrue statement or alleged untrue statement or omission or alleged omission made in any preliminary prospectus provided in each case the Company has performed its obligations under Section 3(a) hereof if either (A) (i) such Holder failed to send or deliver a copy of the Prospectus with or prior to the delivery of written confirmation of the sale by such Holder to the person asserting the claim from which such Losses arise and (ii) the Prospectus would have corrected such untrue statement or alleged untrue statement or such omission or alleged omission, or (B) (x) such untrue statement or alleged untrue statement, omission or alleged omission is corrected in an amendment or supplement to the Prospectus and (y) having previously been furnished by or on behalf of the Company with copies of the Prospectus as so amended or supplemented, such Holder thereafter fails to deliver such Prospectus as so amended or supplemented, with or prior to the delivery of written confirmation of the sale of a Registrable Security to the person asserting the claim from which such Losses arise.

(b) Indemnification by Holders. Each Holder agrees severally and not jointly to indemnify and hold harmless the Company and its respective directors and officers, and each person, if any, who controls the Company (within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act) or any other Holder, from and against all Losses arising out of or based upon any untrue statement or alleged untrue statement of a material fact contained in any Registration Statement or Prospectus or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or based upon any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in reliance upon and in conformity with information furnished to the Company by such Holder expressly for use in such Registration Statement or Prospectus or amendment or supplement thereto. In no event shall the liability of any Holder hereunder be greater in amount than the dollar amount of the proceeds received by such Holder upon the sale of the Registrable Securities pursuant to the Registration Statement giving rise to such indemnification obligation.

(c) Conduct of Indemnification Proceedings. In case any proceeding (including any governmental investigation) shall be instituted involving any person in respect of which indemnity may be sought pursuant to Section 6(a) or 6(b) hereof, such person (the "INDEMNIFIED PARTY") shall promptly notify the person against whom such indemnity may be sought (the "INDEMNIFYING PARTY") in writing and the indemnifying party, upon request of the indemnified party, shall retain counsel reasonably satisfactory to the indemnified party to represent the indemnified party and any others the indemnifying party may designate in such proceeding and shall pay the reasonable fees and disbursements of such counsel related to such proceeding. In any such proceeding, any indemnified party shall have the right to retain its own counsel, but the

fees and expenses of such counsel shall be at the expense of such indemnified party unless (i) the indemnifying party and the indemnified party shall have mutually agreed to the retention of such counsel or (ii) the named parties to any such proceeding (including any impleaded parties) include both the indemnifying party and the indemnified party and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them. It is understood that the indemnifying party shall not, in respect of the legal expenses of any indemnified party in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the fees and expenses of more than one separate firm (in addition to any local counsel) for all indemnified parties, and that all such fees and expenses shall be reimbursed as they are incurred. Such separate firm shall be designated in writing by, in the case of parties indemnified pursuant to Section 6(a), the Holders of a majority (with Holders of Notes deemed to be the Holders, for purposes of determining such majority, of the number of shares of Underlying Common Stock into which such Notes are or would be convertible as of the date on which such designation is made) of the Registrable Securities covered by the Registration Statement held by Holders that are indemnified parties pursuant to Section 6(a) and, in the case of parties indemnified pursuant to Section 6(b), the Company. The indemnifying party shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party from and against any loss or liability by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel as contemplated by the second and third sentences of this paragraph, the indemnifying party agrees that it shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 60 days after receipt by such indemnifying party of the aforesaid request and (ii) such indemnifying party shall not have reimbursed the indemnified party in accordance with such request prior to the date of such settlement. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement of any pending or threatened proceeding in respect of which any indemnified party is or could have been a party and indemnity could have been sought hereunder by such indemnified party, unless such settlement includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such proceeding.

(d) Contribution. To the extent that the indemnification provided for in this Section 6 is unavailable to an indemnified party under Section 6(a) or 6(b) hereof in respect of any Losses or is insufficient to hold such indemnified party harmless, then each applicable indemnifying party, in lieu of indemnifying such indemnified party, shall contribute to the amount paid or payable by such indemnified party as a result of such Losses (i) in such proportion as is appropriate to reflect the relative benefits received by the indemnifying party or parties on the one hand and the indemnified party or parties on the other hand or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the indemnifying party or parties on the one hand and of the indemnified party or parties on the other hand in connection with the statements or omissions that resulted in such Losses, as well as any

other relevant equitable considerations. Benefits received by the Company shall be deemed to be equal to the total net proceeds from the initial placement pursuant to the Purchase Agreement (before deducting expenses) of the Registrable Securities to which such Losses relate. Benefits received by any Holder shall be deemed to be equal to the value of receiving Registrable Securities that are registered under the Securities Act. The relative fault of the Holders on the one hand and the Company on the other hand shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Holders or by the Company, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Holders' respective obligations to contribute pursuant to this paragraph are several in proportion to the respective number of Registrable Securities they have sold pursuant to a Registration Statement, and not joint.

The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 6(d) were determined by pro rata allocation or by any other method or allocation that does not take into account the equitable considerations referred to in the immediately preceding paragraph. The amount paid or payable by an indemnified party as a result of the Losses referred to in the immediately preceding paragraph shall be deemed to include, subject to the limitations set forth above, any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding this Section 6(d), an indemnifying party that is a selling Holder shall not be required to contribute any amount in excess of the amount by which the total price at which the Registrable Securities sold by such indemnifying party and distributed to the public were offered to the public exceeds the amount of any damages that such indemnifying party has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

(e) The indemnity, contribution and expense reimbursement obligations of the parties hereunder shall be in addition to any liability any indemnified party may otherwise have hereunder, under the Purchase Agreement or otherwise.

(f) The indemnity and contribution provisions contained in this Section 6 shall remain operative and in full force and effect regardless of (i) any termination of this Agreement, (ii) any investigation made by or on behalf of any Holder or any person controlling any Holder, or the Company, or the Company's officers or directors or any person controlling the Company and (iii) the sale of any Registrable Securities by any Holder.

SECTION 7. Information Requirements. The Company covenants that, if at any time before the end of the Effectiveness Period the Company is not subject to the reporting requirements of the Exchange Act, it will cooperate with any Holder and take such further reasonable action as any Holder may reasonably request in writing (including, without limitation,

making such reasonable representations as any such Holder may reasonably request), all to the extent required from time to time to enable such Holder to sell Registrable Securities without registration under the Securities Act within the limitation of the exemptions provided by Rule 144 and Rule 144A under the Securities Act and customarily taken in connection with sales pursuant to such exemptions. Upon the written request of any Holder, the Company shall deliver to such Holder a written statement as to whether it has complied with such filing requirements, unless such a statement has been included in the Company's most recent report filed pursuant to Section 13 or Section 15(d) of Exchange Act. Notwithstanding the foregoing, nothing in this Section 7 shall be deemed to require the Company to register any of its securities (other than the Common Stock) under any section of the Exchange Act.

SECTION 8. Miscellaneous.

(a) No Conflicting Agreements. The Company is not, as of the date hereof, a party to, nor shall it, on or after the date of this Agreement, enter into, any agreement with respect to its securities that conflicts with the rights granted to the Holders in this Agreement. The Company represents and warrants that the rights granted to the Holders hereunder do not in any way conflict with the rights granted to the holders of the Company's securities under any other agreements.

(b) Amendments and Waivers. The provisions of this Agreement, including the provisions of this sentence, may not be amended, modified or supplemented, and waivers or consents to departures from the provisions hereof may not be given, unless the Company has obtained the written consent of Holders of a majority of the then outstanding Registrable Securities (with Holders of Notes deemed to be the Holders, for purposes of this Section, of the number of shares of Underlying Common Stock into which such Notes are or would be convertible as of the date on which such consent is requested). Notwithstanding the foregoing, a waiver or consent to depart from the provisions hereof with respect to a matter that relates exclusively to the rights of Holders whose securities are being sold pursuant to a Registration Statement and that does not directly or indirectly affect the rights of other Holders may be given by Holders of at least a majority of the Registrable Securities being sold by such Holders pursuant to such Registration Statement; provided, that the provisions of this sentence may not be amended, modified, or supplemented except in accordance with the provisions of the immediately preceding sentence. Each Holder of Registrable Securities outstanding at the time of any such amendment, modification, supplement, waiver or consent or thereafter shall be bound by any such amendment, modification, supplement, waiver or consent effected pursuant to this Section 8(b), whether or not any notice, writing or marking indicating such amendment, modification, supplement, waiver or consent appears on the Registrable Securities or is delivered to such Holder.

(c) Notices. All notices and other communications provided for or permitted hereunder shall be made in writing by hand delivery, by telecopier, by courier guaranteeing overnight delivery or by first-class mail, return receipt requested, and shall be deemed given (i) when made, if made by hand delivery, (ii) upon confirmation, if made by telecopier, (iii) one (1) Business Day

after being deposited with such courier, if made by overnight courier or (iv) on the date indicated on the notice of receipt, if made by first-class mail, to the parties as follows:

(i) if to a Holder, at the most current address given by such Holder to the Company in a Notice and Questionnaire or any amendment thereto;

(ii) if to the Company, to:

Photronics, Inc.
15 Secor Road
Brookfield, CT 06804
Attention: James A. Eder
Telecopy No.: (203) 755-5601

and

Shearman & Sterling
5599 Lexington Avenue
New York, NY 10022
Attention: Jonathan Jewett
Telecopy No.: (212) 848-7179

(iii) if to the Initial Purchasers, to:

Morgan Stanley & Co. Incorporated
Merrill Lynch, Pierce, Fenner & Smith Incorporated

c/o Morgan Stanley & Co. Incorporated
1585 Broadway
New York, New York
Attention: Equity Capital Markets
Telecopy No.: (212) 761-0538

and

Davis Polk & Wardwell
450 Lexington Avenue
New York, New York 10017
Attention: Alan Dean
Telecopy No.: (212) 450-3800

or to such other address as such person may have furnished to the other persons identified in this Section 8(c) in writing in accordance herewith.

(d) Approval of Holders. Whenever the consent or approval of Holders of a specified percentage of Registrable Securities is required hereunder, Registrable Securities held by the Company or its affiliates (as such term is defined in Rule 405 under the Securities Act) (other than the Initial Purchasers or subsequent Holders if such subsequent Holders are deemed to be such affiliates solely by reason of their holdings of such Registrable Securities) shall not be counted in determining whether such consent or approval was given by the Holders of such required percentage.

(e) Successors and Assigns. Any person who purchases any Registrable Securities from the Initial Purchasers shall be deemed, for purposes of this Agreement, to be an assignee of the Initial Purchasers. This Agreement shall inure to the benefit of and be binding upon the successors and assigns of each of the parties and shall inure to the benefit of and be binding upon each Holder of any Registrable Securities.

(f) Counterparts. This Agreement may be executed in any number of counterparts and by the parties hereto in separate counterparts, each of which when so executed shall be deemed to be original and all of which taken together shall constitute one and the same agreement.

(g) Headings. The headings in this Agreement are for convenience of reference only and shall not limit or otherwise affect the meaning hereof.

(h) Governing Law. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

(i) Severability. If any term, provision, covenant or restriction of this Agreement is held to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated thereby, and the parties hereto shall use their best efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction, it being intended that all of the rights and privileges of the parties shall be enforceable to the fullest extent permitted by law.

(j) Entire Agreement. This Agreement is intended by the parties as a final expression of their agreement and is intended to be a complete and exclusive statement of the agreement and understanding of the parties hereto in respect of the subject matter contained herein and the registration rights granted by the Company with respect to the Registrable Securities. Except as provided in the Purchase Agreement, there are no restrictions, promises, warranties or undertakings, other than those set forth or referred to herein, with respect to the registration rights granted by the Company with respect to the Registrable Securities. This Agreement supersedes all prior agreements and undertakings among the parties with respect to such registration rights. No party hereto shall have any rights, duties or obligations other than those specifically set forth in this Agreement. In no event will such methods of distribution take the form of an underwritten offering of the Registrable Securities without the prior agreement of the Company.

(k) Termination. This Agreement and the obligations of the parties hereunder shall terminate upon the end of the Effectiveness Period, except for any liabilities or obligations under Section 4, 5 or 6 hereof and the obligations to make payments of and provide for liquidated damages under Section 2(e) hereof to the extent such damages accrue prior to the end of the Effectiveness Period, each of which shall remain in effect in accordance with its terms.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

PHOTRONICS, INC.

By

Name:
Title:

Confirmed and accepted as of the date first above written:

MORGAN STANLEY & CO. INCORPORATED

By

Name:
Title:

MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED

By

Name:
Title:

EXECUTIVE SEVERANCE AGREEMENT

This Executive Severance Agreement (the "AGREEMENT") dated as of December 5, 2001 is made and entered into by and between James L. Mac Donald (the "Executive") and Photronics, Inc., a Connecticut corporation (the "Company").

RECITALS

- A. Executive serves as the President of Photronics, Inc., (the "Company"), a Connecticut corporation and a member of the Company's Board of Directors.
- B. The terms and condition of Executive's employment with the Company are governed by an Employment Agreement, dated as of March 31, 1995 as amended by Amendment No. 1, dated September 15, 1999, and extended on each of January 7, 2000 and May 23, 2000 (the "Employment Agreement").
- C. Executive has agreed to terminate his Employment Agreement and resign as the President of the Company and a member of the Company's Board of Director's effective at the close of business (Pacific Time) on December 31, 2001 ("Effective Date"). Accordingly, Executive and the Company desire to enter into this Agreement to set forth, among other things, the payments and benefits Executive will be entitled to receive upon his separation from the Company on the Effective Date.

The parties hereto agree as follows:

AGREEMENT

1. Termination of Employment Agreement; Resignation. The Executive and the Company agree to terminate the Employment Agreement pursuant to Section 13 thereof. On the Effective Date, Executive shall resign as the President of the Company, and as a Director of the Company's Board of Directors and all subsidiaries of the Company. The Executive's employment with the Company shall terminate on the Effective Date.

2. Severance Payments and Benefits. In consideration for the Executive's agreement to resign and his obligations to the Company under paragraphs 5 (Release), 7 (Confidential Information) and 8 (Non-Compete) of this Agreement, Executive shall receive the following severance payments and benefits from the Company upon his termination of employment from the Company on the Effective Date:

2.1 Severance Payments. Cash payments (the "Severance Payments") in an aggregate amount equal to Six Hundred Sixty Thousand Dollars (\$660,000).

- a. The Severance Payments shall be paid by the Company to the Executive in equal bi-weekly payments over a period of twenty four (24) months commencing in January 2002 (each a "Scheduled Payment"). The Company shall withhold from the Severance Payments all required applicable taxes in accordance with all the withholding directions provided by Executive to the

Company on applicable Form W-4 (s) or other equivalent federal and state documentation

b. The Severance Payments shall be paid by automatically scheduled wire transfers of immediately available funds to an account designated by Executive. In the event the Company fails for any reason to make a Scheduled Payment in a timely basis, and the failure to make such payment is not cured by the Company within 10 days after written notice sent to the Company (15 Secor Road, Brookfield, CT 06804, Attention: Corporate Secretary), the aggregate amount of all outstanding remaining payments shall become immediately due and payable within 10 days by the Company to Executive in a single lump-sum payment.

2.2 Continuation of Company sponsored Benefits ("Benefits"). The Company shall continue to provide Executive and his dependents with the Company sponsored medical and dental insurance plans ("Plans"), under the same policies and coverage levels, that the Company provides to its Senior Executive Officers from January 1, 2002 through December 31, 2003 after which time the Executive may elect to continue coverage under the Cobra provisions of the Plans. The Company shall deduct from the Severance Payments an amount equal to the contributions to the Plans Executive would have made had he been an active employee of the Company during such twenty-four (24) months. Participation by the Executive in all other Company sponsored benefits and plans shall terminate on the Effective Date.

2.3 Option Vesting. Executive owns options to purchase 255,186 shares of the Company's common stock, the terms of which are set forth on Exhibit A hereto ("Executive's Options"). The unvested portion of any of Executive's Options to purchase the Company's common stock shall cease to vest on the Effective Date. Executive shall have the right to exercise all vested but unexercised Executive Options on or before December 31, 2003. Thereafter, all remaining unexercised Executive Options shall expire and Executive shall have no further rights in or to the Executive Options. The Company agrees to facilitate Executive's exercise of the Executive Options in a timely manner.

2.4 Company Automobile. Prior to the Effective Date the Executive shall have the right to purchase the Company owned automobile currently used by the Executive for \$50,000. Executive shall be responsible for all taxes as a result of the purchase of this automobile.

2.5 Life Insurance Documentation and Payments. Prior to the Effective Date, the Company shall (i) provide Executive with all documentation and information supporting payments made by the Company to Executive pursuant to Section 4(d) of the Employment Agreement; and (ii) make all required remaining payments to Executive pursuant to Section 4(d) of the Employment Agreement for calendar years 2000 and 2001, including any and all remaining gross-up payments to Executive to provide for Executive's payment of such life insurance policies on an income tax free basis. Following the Effective Date, and provided that all such payments have been made to Executive by the Company, the Company shall have no further obligation to maintain life insurance policies on Executive's behalf.

3. Consulting Services. For a period of two (2) years following the Effective Date, Executive agrees to provide such reasonable advice to the Company as the Chief Executive Officer of the Company may reasonably request from time to time. Executive shall not communicate the nature of his consulting assignments received from the Chief Executive Officer to the Company's employees without the Company's prior written consent. While the parties acknowledge that Executive may continue to interact and communicate with the Company's employees, Executive agrees not to communicate about the Company's business and affairs with any Company employee without the prior consent of the Company's Chief Executive Officer.. In no event shall Executive be required to provide more than five (5) hours per month of consulting services to the Company. Executive's failure to provide such consulting services shall in no event entitle the Company to withhold payment of the Severance Payments or to fail to honor the Company's other obligations hereunder. Until December 31, 2003, but subject to the next sentence, Executive may continue to use his existing office located in the Company's Burbank facility and utilize for Company business such reasonable office support services at the Company's Brookfield office. The Executive understands that the Company may close the Burbank facility at any time and for any reason in which event, Executive shall vacate the office.

4. Company Property. The parties agree that the Company's cell phone(s) issued to Executive shall, following the Effective Date, be transferred, together with all billing and other documentation, to Executive and that Executive shall, following the Effective Date, be responsible for all expenses and liabilities related thereto. Executive agrees to return, on or before the Effective Date, all other property belonging to the Company, including, but not limited to credit cards, laptop computer(s), PDA's, telephone calling cards, gasoline cards, beepers, records, etc.

5. Executive Release. In consideration of, among other things, this Agreement, the Severance Payments, Benefits and extension of option rights provided herein, except as to any obligations provided for or assumed in this Agreement, Executive agrees to waive and release the Company, and each of its affiliated or related entities, partnerships, parent or subsidiary corporations, members, partners, shareholders, directors, officers, employees, attorneys, agents, predecessors, successors and assigns, and each and all of them (collectively referred to as the "Company Releasees"), from all claims, damages, agreements, charges of discrimination or complaints of any nature whatsoever, whether or not now known, suspected or claimed, matured or unmatured, fixed or contingent, which Executive or his successors-in-interest ever had, now has, or may claim to have against the Company Releasees, or any of them, whether directly or indirectly, by reason of any act, event or omission concerning any matter, cause or thing arising prior to the date of execution of this Agreement, including, without limiting the generality of the foregoing, any claims relating to or arising out of (i) Executive's employment or the cessation of that employment; (ii) any agreement between Executive and any of the Company Releasees, including, without limitation, the Employment Agreement; (iii) any tort or tort-type claims; (iv) any federal, state or governmental constitution, statute, regulation or ordinance, including, but not limited to, Title VII of the Civil Rights of 1964, the Employee Retirement Income Security Act, the Age Discrimination in Employment Act, as amended by the Older Workers Benefit Protection Act, the Americans With Disabilities Act, and the California Fair Employment and Housing Act; (v) any claim for wages, salary, bonuses, partnership interests, profit sharing, and/or any other compensation or benefit; (vi) any impairment of Executive's ability to obtain subsequent employment; or (vii) any permanent or temporary disability or loss of future earnings

as a result of injury or disability arising from or associated with employment or the termination of the employment relationship with any of the Company Releasees. This release does not waive or release any claim Executive may have to unemployment or workers' compensation benefits. This release includes a waiver of any rights Executive may have under Section 1542 of the California Civil Code, or any similar statute or law of any other state, regarding the waiver of unknown claims. Section 1542 provides as follows:

"A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM MUST HAVE MATERIALLY AFFECTED HIS SETTLEMENT WITH THE DEBTOR."

Notwithstanding the provisions of Section 1542, and for the purpose of implementing a full and complete release and discharge of all claims, Executive understands and agrees that this Agreement is intended to include in its effect, without limitation, all claims, if any, which Executive may have and which Executive does not now know or suspect to exist in his favor against the Company Releasees, and this Agreement extinguishes any and all of those claims.

6. Company Release. As additional consideration to Executive, and except as to any obligations provided for or assumed in this Agreement, the Company agrees to waive and release Executive, and each of his agents, predecessors, successors and assigns, and each and all of them (collectively referred to as the "Executive Releasees"), from all claims, damages, agreements, or complaints of any nature whatsoever, whether or not known, suspected or claimed, matured or unmatured, fixed or contingent, which the Company or its successors-in-interest ever had, now has, or may claim to have against the Executive Releasees, or any of them, whether directly or indirectly, by reason of any act, event or omission concerning any matter, cause or thing arising prior to the date of execution of this Agreement, including, without limiting the generality of the foregoing, any claims relating to or arising out of (i) Executive's employment or the cessation of that employment; (ii) any agreement between Executive and any of the Company Releasees, including, without limitation, the Employment Agreement; (iii) any tort or tort-type claims; (iv) any federal, state or governmental constitution, statute, regulation or ordinance; and (v) any claims related to the Company's acquisition of Align-Rite International and its subsidiaries. This release includes a waiver of any rights the Company may have under Section 1542 of the California Civil Code (the language of which is set forth above in paragraph 6), or any similar statute or law of any other State, regarding the waiver of unknown claims. Notwithstanding the provisions of Section 1542, and for the purpose of implementing a full and complete release and discharge of all claims, the Company understands and agrees that this Agreement is intended to include in its effect, without limitation, all claims, if any, which the Company may have and which the Company does not now know or suspect to exist in its favor against Executive Releasees, and this Agreement extinguishes any and all of those claims.

7. Confidential Information. Executive acknowledges that during the course of his employment with Align-Rite Corporation and its affiliated companies ("Align-Rite") and the Company, he has had access to information of a confidential and or trade secret nature which has great value to the Company and which constitutes a substantial basis and foundation upon which the business of the Company is based. Such information includes financial, manufacturing and marketing data, techniques, processes, formulas, developmental or experimental work, work in

process, methods, trade secrets (including, without limitation, customer lists and lists of customer sources), or any other secret or confidential information relating to the products, services, customers, sales or business affairs of the Company (the "Confidential Information"). In consideration of the Severance Payment and Benefits provided herein, Executive hereby agrees to keep all such Confidential Information in confidence and shall not disclose any of such Confidential Information to any other person, except to the extent such disclosure is (i) required by applicable law, (ii) lawfully obtainable from other sources, (iii) authorized by the Company, or (iv) publicly known. Executive agrees to continue to abide with the confidential rights agreement signed with Align-Rite prior to its merger with the Company.

8. Non-Compete. In consideration of the Severance Payment and Benefits and other consideration provided to Executive herein, Executive agrees that until December 31, 2003, Executive shall not, directly or indirectly, whether as an owner, partner, shareholder, agent, employee, creditor, or otherwise: (i) promote, participate or engage in any activity or other business competitive with the Company's business of manufacturing and selling photomasks in any jurisdiction in which the Company operates as if such activity or other business involves any use by the Executive of any of the Confidential Information; or (ii) solicit to hire any employee of the Company that was employed by the Company as of the Effective Date or during the consulting services period described in paragraph 3.

9. Company's Successors. Any successor to the Company (whether direct or indirect and whether by purchase, merger, consolidation, liquidation or otherwise) to all or substantially all of the Company's business and/or assets shall assume the obligations under this Agreement and agree expressly to perform the obligations under this Agreement in the same manner and to the same extent as the Company would be required to perform such obligations in the absence of a succession. For all purposes under this Agreement, the term "Company" shall include any successor to the Company's business and/or assets or successor, which becomes bound by the terms of this Agreement by operation of law.

10. Public Announcement. Executive and the Company agree to communicate a positive statement to the Company's employees and the public relating to the Executive's departure from his position as the President of the Company and as a member of the Board of Directors of the Company. Both the Company and Executive acknowledge and agree that any negative comments by either the Company or the Executive may cause damage to Executive and/or the confidence currently held by employees and or the public relating to the Company's future performance. In the event of such unanticipated negative reaction during the period prior to the Effective Date, the Executive and the Company agree to use their reasonable best efforts to remedy this situation.

11. Removal of Restrictive Legends from Executive's Common Stock. Upon the Effective Date, the Company shall provide Executive with new stock certificates representing the total number of shares of Executive's 421,512 shares of the Company's common stock. Such new certificates shall be free of any and all legends restricting the transfer of such shares by Executive, including, without limitation, restrictive legends regarding Rule 144 of the U.S. securities regulations. Executive hereby agrees to provide the Company all documentation related to such shares that is necessary for the Company to fulfill its obligations hereunder no later than two weeks prior to the Effective Date. Subject to the preceding sentence, the Company

hereby agrees to take any and all actions necessary to ensure that such new certificates are presented to Executive upon the Effective Date.

12. Acknowledgement. Executive represents that he has had an opportunity to discuss all aspects of this Agreement with his legal counsel, and understands all provisions of this Agreement and is voluntarily entering into its terms. Executive acknowledges the following: (i) he has been given at least twenty-one (21) days within which to consider this Agreement; (ii) he has been advised in writing that he has the right to and may consult with an attorney before executing this Agreement, and acknowledges that he has had the opportunity to consult an attorney; and (iii) he has seven (7) days following the execution of this Agreement to revoke the Agreement. To revoke the Agreement, Executive must advise the Company in writing of his election to revoke it within the seven (7) day period. Executive recognizes that he is specifically releasing, among other claims, any claims he may have arising under the Age Discrimination in Employment Act of 1967 ("ADEA") and all amendments thereto. Executive acknowledges that this Agreement is intended by the parties to comply with the terms and provisions of the Older Workers Benefit Protection Act of 1990 and all amendments thereto.

13. Miscellaneous Provisions.

13.1 Waiver. No provision of this Agreement shall be modified, waived or discharged unless the modification, waiver or discharge is agreed to in writing and signed by the Executive and by an authorized officer of the Company. No waiver by either party of any breach of, or of compliance with, any condition or provision of this Agreement by the other party shall be considered a waiver of any other condition or provision or of the same condition or provision at another time.

13.2 Entire Agreement. No agreements, representations or understandings (whether oral or written and whether express or implied) which are not expressly set forth in this Agreement have been made or entered into by either party with respect to the subject matter hereof. This Agreement represents the entire understanding of the parties hereto with respect to the subject matter hereof and supersedes all prior arrangements and understandings regarding the same, including, without limitation, the Employment Agreement.

13.3 Choice of Law. The validity, interpretation, construction and performance of this Agreement shall be governed by the internal laws of the State of California, without regard to its conflict of laws rules.

13.4 Severability. The invalidity or unenforceability of any provision or provisions of this Agreement shall not affect the validity or enforceability of any other provision hereof, which shall remain in full force and effect.

13.5 Expenses. Each party shall bear their own legal expenses and costs in connection with the negotiation, preparation and execution of this Agreement. In the event that any action or proceeding is brought in connection with this Agreement the prevailing party therein shall be entitled to recover its costs and reasonable attorney's fees

13.6 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together will constitute one and the same instrument.

13.7 Executive's Breach. The Company shall have no right to withhold payment of the Severance Payments or to fail otherwise to honor its other obligations hereunder until a trial court of competent jurisdiction has held in a final ruling of such court that Executive has breached his obligation under paragraphs 3 (Consulting Services), 7 (Confidential Information) and/or 8 (Non-Compete) of this Agreement. In the event of such a ruling, Executive shall repay to the Company, in a lump sum payment with reasonable interest, the aggregate amount of Severance Payments paid to Executive from the moment of breach. Executive shall have the right to appeal such ruling and in the event such ruling is overturned by a final and binding ruling of an appellate court of competent jurisdiction, the Company shall pay Executive the aggregate amount of all outstanding payments due to Executive following the alleged breach in a single lump-sum payment, together with reasonable interest thereon. Subject to the above, nothing contained herein shall restrict the Company from obtaining any and all applicable relief, in law or equity, in the event of a breach by Executive of any of his obligations to the Company under this Agreement.

13.8 Executive's Death. In the event of Executive's death during the time in which Scheduled Payments are to be made and/or the other benefits are to be provided to Executive, the Company shall pay such Scheduled Payments or provide such benefits (but only to the extent that the underlying benefit plans permit such contribution of benefits) to such person or persons as Executive shall have directed in writing or, in absence of a designation, the estate of Executive. In the event of Executive's death, reference in this Agreement to Executive shall be deemed, where appropriate, to refer to his beneficiary, estate or other legal representative.

IN WITNESS WHEREOF, each of the parties has executed this Agreement, in the case of the Company by its duly authorized officer, as of the day and year set forth above.

PHOTRONICS, INC.

By: -----
Name: Constantine "Deno" Macricostas
Title: Chairman and Chief Executive Officer

By: -----
Name: James A. Eder
Title: Vice President and General Counsel

EXECUTIVE:

By: -----
James L. Mac Donald

LIST OF SIGNIFICANT SUBSIDIARIES

Name	State of Incorporation or Jurisdiction (100% owned unless otherwise indicated)
Photronics Arizona, Inc.	Arizona
Photronics California, Inc.	California
PLI Management Corp.	Florida
Photronics Investment Services, Inc.	Nevada
Photronics Texas I, L.P.	Texas
Photronics Texas II, L.P.	Texas
Align-Rite International, LTD	England
Photronics (UK) Limited	England
Photronics Germany GmbH & Co. KG	Germany
Photronics MZD Verwaltungs GmbH	Germany
Photronics MZD GmbH	Germany
PKL Co., Ltd.	Korea (51%)
Photronics Singapore Pte Ltd.	Singapore
Photronics Services S.A.	Switzerland
PSMC	Taiwan (58%)

INDEPENDENT AUDITORS' CONSENT

We consent to the incorporation by reference in Registration Statements Nos. 333-02245, 333-42010, 333-50809, 33-17530, 33-17405, 33-28118, 33-47446 and 33-78102 on Form S-8 and Registration Statement No. 333-26009 on Form S-3 of Photronics, Inc. of our report dated December 7, 2001 (December 12, 2001 as to Note 17), appearing in this Annual Report on Form 10-K of Photronics, Inc. for the year ended October 31, 2001.

/s/ Deloitte & Touche LLP
Hartford, Connecticut
January 24, 2002