AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON MAY 4, 1999

REGISTRATION NO. 333-

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SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ALPHA INDUSTRIES, INC. (EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

DELAWARE
(STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION)

04-2302115 (I.R.S. EMPLOYER IDENTIFICATION NUMBER)

ALPHA INDUSTRIES, INC. 20 SYLVAN ROAD WOBURN, MA 01801 (781) 935-5150

(ADDRESS, INCLUDING ZIP CODE AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF REGISTRANT'S PRINCIPAL EXECUTIVE OFFICES)

-----

THOMAS C. LEONARD
PRESIDENT AND CHIEF EXECUTIVE OFFICER
ALPHA INDUSTRIES, INC.
20 SYLVAN ROAD
WOBURN, MASSACHUSETTS 01801
(781) 935-5150

(NAME, ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF AGENT FOR SERVICE)

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COPIES TO:

STEVEN R. LONDON, ESQUIRE BROWN, RUDNICK, FREED & GESMER ONE FINANCIAL CENTER BOSTON, MASSACHUSETTS 02111 (617) 856-8200 PHILIP P. ROSSETTI, ESQUIRE
HALE AND DORR LLP
60 STATE STREET
BOSTON, MASSACHUSETTS 02109
(617) 526-6000

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: As soon as practicable after the effective date of this Registration Statement.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, check the following box. [

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If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.  $[\ ]$ 

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. [ ]

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. [ ]

If delivery of the prospectus is expected to be made pursuant to Rule 434, check the following box.  $[\ ]$ 

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CALCULATION OF REGISTRATION FEE

Common Stock, \$.25 par value....... 3,450,000 \$33.5625 \$115,790,625 \$32,190

underwriters to cover over-allotments, if any.

(2) Estimated solely for the purpose of determining the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, and based upon the average of the reported high and low prices of the common stock on the Nasdaq National Market on April 29, 1999.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENTS SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8 (a) OF THE SECURITIES ACT OF 1933 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8 (a), MAY DETERMINE.

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THE INFORMATION CONTAINED IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THESE SECURITIES MAY NOT BE SOLD UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND IT IS NOT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

3,000,000 SHARES [ALPHA LOGO]

COMMON STOCK

\$ PER SHARE

Alpha Industries, Inc. is offering 3,000,000 shares of common stock with this prospectus. This is a firm commitment underwriting.

The common stock is listed on the Nasdaq National Market under the symbol "AHAA." On May 3, 1999, the last reported sale price of the common stock on the Nasdaq National Market was \$34.063 per share.

INVESTING IN THE COMMON STOCK INVOLVES A HIGH DEGREE OF RISK. SEE "RISK FACTORS" BEGINNING ON PAGE 6.

, 1999

The date of this Prospectus is

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Following the prospectus cover page on the top left is the title, "Serving Global Wireless Communications Markets," directly underneath which is the following description:

Alpha designs and manufactures a broad range of products for the wireless voice and data communications markets. These products include: radio frequency, microwave frequency and millimeter wave frequency integrated circuits, discrete components and ceramic resonators and ferrites.

On the top right are, from top going down, color photos of two wireless telephones and a hand-held wireless data device which is under development. To the left is a photo of two individuals operating a wireless networked portable personal computer.

In the center of page, below the photographs, is an illustration of the inside of a cordless telephone handset, with arrows indicating the location inside the cellular telephone handset of the following components sold by the Company:

Couplers and Detectors Power Amplifiers Switches Diodes

Beneath the opened telephone handset is the Alpha logo,

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As used in this prospectus, the terms "we," "us," "our" and "Alpha" mean Alpha Industries, Inc. and its subsidiaries (unless the context indicates a different meaning), and the term "common stock" means our common stock, \$0.25 par value per share. Unless otherwise stated, all information contained in this prospectus assumes no exercise of the over-allotment option granted to the underwriters. All share and per share data, including market prices, in this prospectus have been adjusted for the three-for-two common stock split effected on February 19, 1999.

The underwriters are offering the shares subject to various conditions and may reject all or part of any order. The shares should be ready for delivery on or about , 1999, against payment in immediately available funds.

#### PROSPECTUS SUMMARY

You should read the following summary together with the more detailed information regarding our company and the common stock being sold in this offering and our financial statements and accompanying notes that appear elsewhere in this prospectus.

### ABOUT ALPHA

We design, develop, manufacture and market proprietary radio frequency, microwave frequency and millimeter wave frequency integrated circuits and discrete semiconductors for wireless voice and data communications. The primary applications for our products include wireless handsets for cellular and personal communication services, or PCS. We also produce integrated circuits, discrete components and ceramic resonators and ferrites used in wireless base station equipment, cable television, wireless local loop, wireless personal digital assistants and wireless local area networks.

Industry analysts expect sales of wireless handsets to grow from 163 million units in 1998 to approximately 257 million units in 2000. This represents a 25% compound annual growth rate. Consumer wireless applications are expanding from voice-only to many different forms of data transmission, including applications enabling wireless access to the Internet and e-mail, as well as wireless home automation. Many of these new wireless data applications need more bandwidth than voice. Gallium arsenide, or GaAs, semiconductor technology has emerged as an effective alternative or complement to silicon technology in many high performance radio frequency, microwave frequency and millimeter wave frequency voice and data applications. GaAs has inherent physical properties that permit devices to operate at much higher speeds than silicon devices or at the same speeds with lower power consumption.

We offer a broad range of products, including integrated circuit switches and controls, power amplifiers, diodes and components that comprise a significant portion of the radio frequency devices used in wireless telephone handsets. We use a range of technologies, processes and materials to meet our customers' performance requirements, including gallium arsenide metal semiconductor field effect transistor, or GaAs MESFET, gallium arsenide pseudomorphic high electron mobility transistor, or GaAs PHEMT, silicon and electrical ceramic. We currently are developing power amplifiers and other devices made with the gallium arsenide heterojunction bipolar transistor, or GaAs HBT.

We have divided our operations into three groups to address the distinct dynamics of different markets: (1) The Wireless Semiconductor Products Group supplies GaAs integrated circuits and discrete semiconductors in high volume for wireless telephone handsets and wireless data applications. These products are used in all major air interface standards, including the leading digital standards, Global System for Mobile Communications, or GSM, Code Division Multiple Access, or CDMA and Time Division Multiple Access, or TDMA. This Group generated \$65.8 million or 52.1% of our total sales in fiscal 1999. (2) The Application Specific Products Group supplies radio frequency, microwave frequency and millimeter wave frequency GaAs integrated circuits and discrete semiconductors and components for customized products in the satellite communications, broadband data and defense markets. This Group generated \$35.0million or 27.7% of our total sales in fiscal 1999. (3) The Ceramics Products Group uses electrical ceramic and ferrite technologies to supply resonators and filters, primarily for wireless base station equipment. This Group generated \$25.5 million or 20.2% of our total sales in fiscal 1999.

We focus our sales and marketing efforts on dominant original equipment manufacturers in the wireless communications industry and their principal suppliers. During calendar 1998, we increased our penetration in this industry from 25 products for 13 handset platforms to 74 products for 35 handset platforms. Our product portfolio has helped us become a strategic supplier to Motorola and Ericsson, two of the three largest producers of handsets in the world. Motorola and Ericsson were our largest customers in fiscal 1999, representing 36.3% of our sales in this period.

Our principal executive offices are located at 20 Sylvan Road, Woburn, Massachusetts 01801. Our telephone number is (781) 935-5150.

### THE OFFERING

Common stock offered by Alpha	3,000,000 shares
Common stock to be outstanding after the offering	19,017,103 shares
Use of proceeds	For working capital and general corporate purposes, which may include the purchase of equipment, the expansion of facilities and potential acquisitions.

Nasdaq National Market symbol..... AHAA

# SUMMARY CONSOLIDATED FINANCIAL INFORMATION

The as adjusted balance sheet data in the table below give effect to the sale of 3,000,000 shares of common stock offered by us at an assumed offering price of \$34.063 per share, and the application of the net proceeds from the sale of the shares, after deducting the estimated underwriting discount and estimated offering expenses payable by us. See "Use of Proceeds."

	YEARS ENDED				
	MARCH 30,	MARCH 29, 1998	MARCH 28, 1999		
	(IN THOUSANDS				
STATEMENT OF OPERATIONS DATA:					
Sales	\$ 85,253	\$116,881	\$126,339		
Gross profit	16,734	44,082	55,208		
Operating income (loss)	(15,326)	11,688	19,555		
Income (loss) before income taxes	(15,572)	11,447	20,225		
Net income (loss)	\$(15,572)	\$ 10,302	\$ 21,490		
	=======	=======	=======		
Net income (loss) per share:					
Basic	\$ (1.05)	\$ 0.67	\$ 1.36		
	=======		=======		
Diluted	\$ (1.05)	\$ 0.66	\$ 1.31		
	=======	=======	=======		
Shares used in per share calculation:					
Basic	14.772	15.302	15.824		
	=======				
Diluted	14,772				
211000	•		=======		

	MARCH	28, 1999
	ACTUAL	AS ADJUSTED
	(IN TH	OUSANDS)
BALANCE SHEET DATA: Cash, cash equivalents and short-term investments Working capital Total assets Long-term debt, including current portion Stockholders' equity	42,687 106,681	\$120,084 139,011 203,005 1,625 177,338

#### RISK FACTORS

You should carefully consider the following factors before deciding to invest in the shares. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us, which we currently deem immaterial or which are similar to those faced by other companies in our industry or business in general, may also impair our business operations. If any of the following risks actually occurs, our business, financial condition or results of future operations could be materially and adversely affected. In such case, the trading price of our common stock could decline, and you may lose all or part of your investment. This prospectus also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks faced by us described below and elsewhere in this prospectus. Please refer to "Forward-Looking Statements" on page 12.

OUR RELIANCE ON A SMALL NUMBER OF CUSTOMERS FOR A LARGE PORTION OF OUR SALES COULD HAVE A MATERIAL ADVERSE EFFECT ON OUR RESULTS OF OPERATIONS.

A significant portion of our sales in each fiscal period has been concentrated among a limited number of customers. If we lost one or more of these major customers, or if one or more major customers decreases its orders, our business would be materially and adversely affected. In recent periods, sales to our major customers as a percentage of total sales have increased. In fiscal 1999, sales to our five largest customers accounted for 50.2% of our sales, with Motorola accounting for 28.1% of sales. Our future operating results depend on the success of these customers and our success in selling products to them.

OUR SALES VOLUME IS AFFECTED BY OUR OEM CUSTOMERS' SALES VOLUME.

A substantial portion of our sales is derived from sales of products to OEMs. These OEMs demand highly reliable products and often require up to several months to evaluate and test our integrated circuits and devices before deciding to design them into their products. If our products are designed into an OEM's product, our sales volume will depend upon the commercial success of the OEM's product.

SALES TO OUR OEM CUSTOMERS FLUCTUATE WITH THEIR PRODUCT CYCLES.

Because the markets our OEM customers serve are characterized by numerous new product introductions and rapid product enhancements, our operating results may vary significantly in some fiscal quarters. OEMs generally are in various stages of designing replacement products for their mature products. During the final production of a mature product, OEMs typically consume their existing inventory of our products. Consequently, orders for our products can be reduced. Even if our products are designed into both the mature product and the replacement product, our sales may suffer. Typically, production of the mature product will cease as the replacement product is introduced. A delay in the transition to commercial production of the replacement product would delay our ability to recover the lost sales from the discontinuation of the mature product. The decrease in our sales in the first two fiscal quarters of fiscal 1999 compared with the fourth quarter of fiscal 1998 was primarily attributable to this dynamic as our largest customer was introducing a new series of handsets. We may continue to experience these fluctuations in our operating results in the future.

DIFFICULTIES IN PRODUCTION WOULD ADVERSELY AFFECT OUR OPERATING RESULTS.

Our products are very complex, have sophisticated designs and are manufactured using highly complex process technologies. In most cases, our products are customized for our customers who insist that our products meet their exact specifications for quality, performance and reliability. If we are unable to manufacture to our customers' specifications, our operating results will suffer.

IF ONE OF OUR LIMITED NUMBER OF ASSEMBLY SUBCONTRACTORS FAILS TO PERFORM AS EXPECTED, OUR OPERATING RESULTS WOULD SUFFER.

We use assembly subcontractors located outside the United States to wirebond and package large volume orders of integrated circuits. We attempt to maintain more than one qualified service supplier for each assembly process. From time to

time we have been unable to achieve this goal because of minimum volume requirements imposed by suppliers, lack of capacity, service quality issues or other factors. We have experienced problems procuring assembly services, and we cannot guarantee that we will avoid similar problems in the future. For example, an assembly subcontractor in Asia recently ceased production of our products despite their assurances that they would continue production without interruption. Our inability to obtain sufficient high quality and timely assembly service, or the loss of any of our current assembly vendors, would result in delays or reductions in product shipment and reduced product yields. Any of these events would materially and adversely affect our operating results.

OUR OPERATING RESULTS ARE DEPENDENT ON THE DEVELOPMENT OF NEW PRODUCTS.

Our future success will depend on our ability to develop new products in a timely and cost-effective manner. The development of our new products is highly complex. We have historically experienced delays in completing the development and introduction of new products. The successful development and introduction of new products depends on a number of factors, including:

- our timely completion of product designs and development;
- our ability to develop manufacturing processes for new products; and
- commercial acceptance of our new products and enhancements.

OUR FAILURE TO KEEP PACE WITH RAPID TECHNOLOGICAL CHANGES IN THE WIRELESS COMMUNICATIONS INDUSTRY WOULD IMPAIR OUR GROWTH.

The wireless communications markets are characterized by frequent introductions of new products and services. New products and services respond to evolving product and process technologies and consumer demand for greater functionality, lower costs, smaller products and better performance. As a result, we have experienced, and will continue to experience, product design obsolescence. We must continue to improve our product designs and develop new products with new technologies to meet our customers' demands.

We believe that the next generation of consumer wireless data applications will offer such features as Internet access, e-mail and home automation. If we fail to develop products for this potential market, our operating results could be materially and adversely affected.

WE OPERATE IN VERY COMPETITIVE INDUSTRIES AND WE MAY BE UNABLE TO COMPETE SUCCESSFULLY.

Competition in the markets for our products is intense. We compete with several companies primarily engaged in the business of designing, manufacturing and selling integrated circuits, discrete semiconductors and ceramic products, as well as suppliers of other discrete products. Our competitors could develop new process technologies that may be superior to ours. In addition, many of our existing and potential customers manufacture or assemble wireless communications devices and have substantial in-house technological capabilities. If one of our large customers decided to design and manufacture integrated circuits internally, it could have an adverse effect on our operating results. For example, we compete with our largest customer in the production of power amplifiers.

Many of our existing and potential competitors have strong market positions, considerable internal manufacturing capacity, established intellectual property rights and substantial technological capabilities. Many of our existing and potential competitors have greater financial, technical, manufacturing and marketing resources than we do. We cannot guarantee that we will be able to compete successfully with our competitors.

We expect competition to increase. This could mean lower prices for our products or reduced demand for our products. Any of these developments would have an adverse effect on our operating results.

AVERAGE SELLING PRICES FOR OUR PRODUCTS TYPICALLY DECLINE OVER TIME.

Average selling prices for our products decline over time. Many of our manufacturing costs are fixed. For a given level of sales, when our manufacturing costs decline, our gross margins improve, and when our manufacturing costs increase, our gross margins decline. Our operating results suffer when gross margins decline. We may experience these problems in the future and we cannot predict when they may occur or their severity.

OUR OPERATING RESULTS WOULD SUFFER IF ONE OF OUR KEY SUPPLIERS FAILS TO DELIVER MATERIALS FOR THE FABRICATION OF OUR PRODUCTS.

We currently procure certain materials and services for our products from one or a limited number of suppliers. For example, we procure GaAs substrates, a critical raw material, from only two suppliers. In addition, we obtain some GaAs wafers from a single external foundry. Further, we procure silicon substrates for semiconductors and certain chemical powders for ceramic manufacturing from single sources. We purchase these materials and services on a purchase order basis. We do not carry significant inventories or have any long-term supply contracts with our vendors. Our inability to obtain these materials or services in required quantities or in acceptable quality would result in significant delays or reductions in product shipments. This would materially and adversely affect our operating results.

OUR OPERATING RESULTS MAY FLUCTUATE SIGNIFICANTLY.

Our sales, earnings and other operating results have fluctuated significantly in the past and may fluctuate significantly in the future primarily as a result of the following:

- timing and receipt of our customers' orders; and
- the potential for delay or deferral of customer implementation of our technology into their products.

OUR GROWTH IS DEPENDENT ON THE GROWTH OF WIRELESS COMMUNICATIONS MARKETS.

We depend on the development and growth of markets for wireless communications products and services, including cellular and personal communications services, or PCS, telephones and other wireless applications. We cannot be sure as to the rate at which these markets will develop, if at all. Any slowdown in the rate of growth of the wireless communications market would have a material adverse affect on our operating results.

OUR BUSINESS COULD BE ADVERSELY AFFECTED BY OUR FAILURE TO DEVELOP GAAS HBT TECHNOLOGY.

We are developing GaAs HBT process technology primarily to manufacture power amplifiers and certain other components. We are pursuing this development effort with a third party designer and a third party foundry. We believe GaAs HBT components will be successfully designed into wireless telephone and wireless data handsets. Although we believe that we will be successful in developing and introducing a line of GaAs HBT products, we cannot guarantee that our efforts will result in commercially successful GaAs HBT products in the anticipated time or on budget, if at all. Certain of our competitors are already offering this capability and our customers may purchase their requirements for these products from our competitors. Our third party designer and our third party foundry may delay or fail to deliver to us GaAs HBT technology and products. Our business and prospects could be materially and adversely affected by our failure to develop this technology.

THE BENEFITS OF OUR GAAS PRODUCTS COMPARED TO SILICON ALTERNATIVES MAY NOT CONTINUE.

The production of GaAs integrated circuits is more costly than the production of silicon circuits. As a result, we must offer GaAs products that provide superior performance to that of silicon for specific applications to be competitive with silicon products. If we do not continue to offer products that provide sufficiently superior performance to offset the cost differential, our operating results may be materially and adversely affected. We believe our costs of producing GaAs integrated circuits will continue to exceed the costs associated with the production of silicon circuits. The costs differ because of higher costs of raw materials for GaAs, lower production yields in GaAs technology and higher unit costs associated with lower production volumes. Silicon semiconductor technologies are widely used process technologies for certain integrated circuits and these technologies continue to improve in performance. We cannot assure you that we will continue to identify markets that require performance superior to that offered by silicon solutions.

OUR FIXED COSTS MAY REDUCE OPERATING RESULTS IF OUR SALES FALL BELOW EXPECTATIONS.

Our expense levels are based, in part, on our expectations as to future sales. Many of our expenses, particularly those relating to our capital equipment and manufacturing overhead, are relatively fixed. We may be unable to reduce spending quickly enough to compensate for reductions in

sales. Accordingly, shortfalls in sales may materially and adversely affect our operating results.

WE ARE NOT PROTECTED BY LONG-TERM CONTRACTS WITH OUR CUSTOMERS.

We generally do not enter into long-term contracts with our customers and we cannot be certain as to future order levels from our customers. When we do enter into a long-term contract, the contract generally is terminable for the convenience of the customer. In the event of an early termination of a contract by one of our major customers, it is unlikely that we will be able to identify an alternative purchaser for that product.

OUR RELIANCE ON GOVERNMENT CONTRACTS FOR A SIGNIFICANT PORTION OF OUR SALES COULD HAVE A MATERIAL ADVERSE EFFECT ON OUR RESULTS OF OPERATIONS.

Although we have reduced our dependence upon sales to the United States Government, we estimate that approximately 20.8% of our sales in fiscal 1997, 17.6% of our sales in fiscal 1998 and 17.2% of our sales in fiscal 1999 were derived from United States defense related sources. If we experience significant reductions or delays in procurements of our products by the United States Government or terminations of government contracts or subcontracts, our operating results could be materially and adversely affected. Generally, the United States Government and its contractors and subcontractors may terminate their contracts with us for cause or for convenience. We have in the past experienced terminations of government contracts. We cannot guarantee that we will not experience terminations of government contracts in the future.

WE FACE SIGNIFICANT CHALLENGES MANAGING OUR GROWTH.

We are experiencing a period of significant growth that will continue to place a strain on our resources. We have grown from 860 employees on December 27, 1998 to 935 employees on March 28, 1999. To manage our growth effectively, we must continue to:

- improve operational systems;
- maintain adequate physical plant, manufacturing facilities and equipment to meet customer demand;
- add experienced senior level managers; and
- attract and retain qualified people with experience in engineering, design and manufacturing.

We will spend substantial amounts of money in connection with our growth and may have additional unexpected costs. Our manufacturing equipment may not be adequate to support rapid increases in orders for our products, and we may not be able to expand quickly enough to exploit potential market opportunities. If we cannot attract qualified people or manage growth effectively, our business, operating results and financial condition could be adversely affected.

THERE MAY BE UNANTICIPATED COSTS ASSOCIATED WITH INCREASING OUR CAPACITY.

We anticipate that any future growth of our business will require increased manufacturing capacity. We expect to complete the current expansion of our GaAs production capabilities by the summer of 1999 at a total cost of approximately \$18 million. We may be required to purchase significant additional equipment or further expand our facilities if the increased demand for our products that we experienced in fiscal 1999 continues. Expansion activities such as these are subject to a number of risks, including:

- unavailability or late delivery of the advanced, and often customized, equipment used in the production of our products;
- delays in bringing new production equipment on-line;
- work stoppages and delays in supplying products for our existing customers during expansion activities; and
- unforeseen environmental or engineering problems relating to existing or new facilities.

These and other risks may affect the ultimate cost and timing of our present expansion or any future expansion of our capacity.

THE VOLATILITY OF OUR STOCK PRICE COULD AFFECT YOUR INVESTMENT IN OUR STOCK.

The market price of our common stock has fluctuated widely. For example, between

February 1, 1999 and March 2, 1999 the price of our common stock dropped from approximately \$27.92 to \$13.50 per share. Between March 2, 1999 and April 29, 1999, the price of our common stock rose from approximately \$13.50 to \$34.25 per share. Consequently, the current market price of our common stock may not be indicative of future market prices, and we may not be able to sustain or increase the value of your investment in our common stock. Factors affecting our stock price may include:

- variations in operating results from quarter to quarter;
- changes in earnings estimates by analysts or our failure to meet analysts' expectations;
- market conditions in the industry; and
- general economic conditions.

WE DEPEND ON A FEW KEY EMPLOYEES WHO HAVE EXPERIENCE WITH OUR COMPLEX PRODUCTS.

Our success depends in part on retaining key technical and management personnel. In particular, the number of individuals with experience in the production of our complex products and related processes is very limited, and our future success depends in part on retaining those individuals who are already employees. We must also continue to attract and retain qualified personnel in a very competitive environment. We cannot guarantee that we will be able to continue to attract and retain these personnel.

OUR INTERNATIONAL SALES COULD DECLINE AS A RESULT OF CURRENCY EXCHANGE FLUCTUATIONS AND OTHER FACTORS.

Our sales outside of the United States were approximately \$32.1 million in fiscal 1997, \$46.0 million in fiscal 1998 and \$53.7 million in fiscal 1999. Because most of our foreign sales are denominated in United States dollars, our products, particularly our ceramics products, become less price competitive with products manufactured by competitors based in countries whose currencies decline in value against the dollar. International sales involve a number of additional risks, including:

- imposition of government controls;
- potential insolvency of international distributors and representatives;
- fluctuation of economies outside the United States;
- political instability outside the United States;
- generally longer receivables collection periods for foreign customers;
   and
- tariffs and other trade barriers.

In addition, due to the technological advantage provided by GaAs in many military applications, a portion of our sales outside of North America must be licensed by the Bureau of Export Administration of the United States Department of Commerce or the Office of Defense Trade Controls of the United States Department of State. Although we have not experienced any difficulty in obtaining these licenses, failure to obtain such licenses in the future could have a material adverse effect on our operating results.

OUR COMPLIANCE WITH ENVIRONMENTAL REGULATIONS MAY BE COSTLY.

We are subject to a variety of federal, state and local requirements governing the protection of the environment. These requirements relate to the use, storage, handling, discharge and disposal of toxic or otherwise hazardous materials used in our manufacturing processes. We may incur significant expense in complying with these requirements, and these requirements may become more stringent in the future. In the past, compliance with environmental regulations and our response to environmental claims and litigation has been costly. Failure to comply with environmental regulations could subject us to substantial liability or force us to change our manufacturing operations. In addition, under some of these regulations, we could be held financially responsible for remedial measures if our properties are contaminated, even if we did not cause the contamination.

WE MAY HAVE DIFFICULTY IN PROTECTING OUR INTELLECTUAL PROPERTY.

Our ability to compete is affected by our ability to protect our intellectual property. A significant aspect of our intellectual property is our product and process technology. We rely primarily on trade secret laws, confidentiality procedures and licensing arrangements to protect our intellectual property. The laws of certain foreign countries in which our products are or may be developed,

manufactured or sold may not protect our products or intellectual property rights to the same extent as do the laws of the United States. This may make the possibility of piracy of our technology and products more likely. We cannot assure you that the steps taken by us to protect our intellectual property will be adequate to prevent misappropriation of our technology.

OUR OPERATIONS COULD INFRINGE ON THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS.

Particular aspects of our technology could be found to infringe on the intellectual property rights or patents of others. Other companies may hold or obtain patents on inventions or may otherwise claim proprietary rights to technology necessary to our business. We cannot predict the extent to which we may be required to seek licenses. We cannot guarantee that the terms of any licenses we may be required to seek will be reasonable.

WE MAY HAVE DIFFICULTY IN MANAGING AND INTEGRATING ACQUISITIONS.

From time to time, we explore opportunities to acquire businesses to expand our production capacity and our product offerings. Acquisitions involve numerous risks, including:

- difficulties in integrating operations, products and corporate cultures;
- difficulties in completing the development of acquired technologies;
- the ability to manage different geographic units;
- entering markets or businesses in which we have limited experience; and
- the loss of key employees of the acquired businesses.

Moreover, any delay or failure to integrate an acquired company, technology or product line could result in the additional expenditure of money and in increased demands on our management's time. These expenditures and demands could have a material adverse effect on our business, financial condition and results of operations and on the price of our common stock. Acquisitions may involve expending significant funds and the issuance of additional securities, which may be dilutive to stockholders.

YEAR 2000 READINESS; YEAR 2000 PROBLEMS COULD DISRUPT OUR BUSINESS.

We have evaluated our internal software and products for Year 2000 concerns. We believe that our products and business will not be substantially affected by the Year 2000 and that we have no significant exposure to liabilities related to the Year 2000 issue for the products we have sold. We have also communicated with others, including vendors, suppliers and customers whose computer systems' functionality could directly impact our operations.

Although we believe our planning efforts are adequate to address our Year 2000 concerns, we cannot be sure that we will not experience negative consequences or significant costs caused by undetected Year 2000 errors or defects in the technology used in our internal systems. We also cannot be sure that our vendors, suppliers, customers or businesses that we may acquire will not experience similar consequences or costs. Such consequences or costs could have a material adverse effect on us.

#### FORWARD-LOOKING STATEMENTS

This prospectus and the documents we have filed with the Securities and Exchange Commission which we have referenced under "Where You Can Find More Information" on page 40 contain forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995.
Forward-looking statements represent our judgment regarding future events.
Although we would not make forward-looking statements unless we believe we have a reasonable basis for doing so, we cannot guarantee their accuracy and actual results may differ materially from those we anticipated due to a number of uncertainties, many of which we are not aware. We urge you to consider the risks and uncertainties discussed under "Risk Factors" and elsewhere in this prospectus and in the other documents filed with the SEC in evaluating our forward-looking statements. We have no plans to update our forward-looking statements to reflect events or circumstances after the date of this prospectus. We generally identify forward-looking statements with the words "plans," "expects," "anticipates," "estimates," "will," "should" and similar expressions.

#### USE OF PROCEEDS

We estimate that the net proceeds from the sale of the 3,000,000 shares of common stock we are offering will be approximately \$96.3 million. If the underwriters fully exercise the over-allotment option, the net proceeds will be approximately \$110.8 million. For the purpose of estimating net proceeds, we are assuming that the public offering price will be \$34.063 per share. "Net proceeds" is what we expect to receive after we pay the underwriting discount and other estimated expenses for this offering.

We expect to use the net proceeds for working capital and general corporate purposes, which may include the purchase of equipment and the expansion of facilities. We also may use a portion of the net proceeds for acquisitions to expand our production capacity and our product offerings. From time to time we have discussed potential strategic acquisitions with third parties. We are not currently in discussions regarding an acquisition and have no agreements or commitments to complete an acquisition. Pending our uses of the proceeds, we intend to invest the net proceeds of this offering primarily in short-term, interest-bearing instruments.

# DIVIDEND POLICY

We have not paid cash dividends on our common stock since fiscal 1986, and we do not anticipate paying cash dividends in the foreseeable future. Our current policy is to retain all of our earnings to finance future growth. We are subject to financial and operating covenants, including restrictions on the payment of cash dividends, under our bank financing agreements. On February 19, 1999, we distributed a three-for-two common stock split.

### PRICE RANGE OF COMMON STOCK

On June 2, 1998, our common stock started trading on the Nasdaq National Market under the symbol AHAA. Prior to that our common stock traded on the American Stock Exchange under the symbol AHA. The following table sets forth, for the periods indicated, the high and low sales prices for the common stock, as reported on the Nasdaq National Market or the American Stock Exchange, as applicable.

	HIGH	LOW
FISCAL 1998: First Quarter. Second Quarter. Third Quarter. Fourth Quarter.	\$ 5.875 12.750 13.750 13.333	\$ 3.667 5.500 8.583 9.333
FISCAL 1999: First Quarter. Second Quarter. Third Quarter. Fourth Quarter.	\$12.583 11.500 24.833 27.917	\$ 7.833 6.167 5.750 13.500
FISCAL 2000: First Quarter (through May 3, 1999)	\$36.500	\$17.625

On May 3, 1999, the last reported sale price reported on the Nasdaq National Market for the common stock was \$34.063 per share. On May 3, 1999, there were approximately 978 holders of record of the common stock.

# CAPITALIZATION

The following table presents our capitalization as of March 28, 1999 on an actual basis and as adjusted to reflect the sale of 3,000,000 shares of common stock that we are offering with this prospectus at an assumed offering price of \$34.063 per share, and the application of the proceeds, net of the estimated underwriting discount and our estimated expenses for this offering.

The total number of shares of outstanding common stock, as adjusted for this offering, excludes at March 28, 1999: (1) 1,761,523 shares of common stock issuable upon exercise of outstanding stock options at a weighted average price of \$6.70 per share; (2) 124,975 shares of common stock reserved for issuance pursuant to our Employee Stock Purchase Plan; and (3) 919,909 shares of common stock reserved for issuance pursuant to stock options not yet granted under all of our stock option plans. This total also excludes 675,000 shares of common stock reserved by our Board of Directors on April 27, 1999 for issuance upon the exercise of options which may be granted in the future to our employees who are not also officers or Directors.

		1 28, 1999
	ACTUAL	AS ADJUSTED
		'HOUSANDS)
Cash, cash equivalents and short-term investments	\$23 <b>,</b> 760	
Long-term debt, less current portion	\$ 713	\$ 713
shares, as adjusted, issued and outstanding Additional paid-in capital	18,276	4,763 154,446 18,276 (133) (14)
Total stockholders' equity	81,014	177,338
Total capitalization	\$81,727 ======	\$178,051 =====

#### SELECTED CONSOLIDATED FINANCIAL DATA

We derived the statement of operations data for the years ended March 30, 1997, March 29, 1998 and March 28, 1999 and balance sheet data as of March 29, 1998 and March 28, 1999 from the audited financial statements in this prospectus. Those financial statements were audited by KPMG Peat Marwick LLP, independent accountants. We derived the statement of operations data for the years ended April 2, 1995 and March 31, 1996 and balance sheet data as of April 2, 1995, March 31, 1996 and March 30, 1997 from audited financial statements that are not included in this prospectus. Historical results are not necessarily indicative of results of operations to be expected in the future. The following selected consolidated financial data should be read in conjunction with our consolidated financial statements and notes thereto, and with Management's Discussion and Analysis of Financial Condition and Results of Operations included elsewhere in this prospectus.

During fiscal 1996, we recorded a \$320,000 repositioning benefit attributable to the reversal of certain accruals for estimated carrying costs as a result of an earlier than expected disposition of our Methuen, Massachusetts facility. During fiscal 1997, we recorded repositioning expenses of \$2.1 million, related primarily to the reduction of our ceramics operations and the sale of a nonstrategic product line.

	YEARS ENDED					
	APRIL 2, 1995	MARCH 31, 1996	MARCH 30, 1997	MARCH 29, 1998	MARCH 28, 1999	
		(IN THOUSANDS	EXCEPT PER	SHARE DATA)		
STATEMENT OF OPERATIONS DATA:						
Sales Cost of sales	\$78,254 54,376	\$96,894 65,986	\$ 85,253 68,519	\$116,881 72,799	\$126,339 71,131	
Gross profit	23,878	30,908	16,734	44,082	55,208	
Research and development expenses	4,154	9,148	9,545	10,035	12,886	
Selling and administrative expenses	15 <b>,</b> 727	17 <b>,</b> 226 (320)	20,441 2,074	22,359	22 <b>,</b> 767 	
Repositioning expenses (benefit)		(320)				
Operating income (loss)	3,997	4,854	(15,326)	11,688	19,555	
Other income (expense), net	(648)	(391)	(246)	(241)	670	
Income (loss) before income taxes	3,349	4,463	(15,572)	11,447	20,225	
Provision (benefit) for income taxes	502	669		1,145	(1,265)	
27	^ ^ ^ ^ A					
Net income (loss)	\$ 2,847 ======	\$ 3,794 ======	\$(15,572) ======	\$ 10,302 ======	\$ 21,490 ======	
Net income (loss) per share:						
Basic	\$ 0.25 =====	\$ 0.30 =====	\$ (1.05) ======	\$ 0.67 ======	\$ 1.36 ======	
Diluted	\$ 0.24	\$ 0.29	\$ (1.05)	\$ 0.66	\$ 1.31	
Shares used in per share calculation:	======	=====	======	======	======	
Basic	11,410	12,551	14,772	15,302	15,824	
Diluted	11,823	13,126	14,772	15,711	16,351	
222000	======	=====	======	======	======	
	APRIL 2, 1995	MARCH 31, 1996	MARCH 30, 1997	MARCH 29, 1998	MARCH 28, 1999	
			IN THOUSANDS			
DALANCE CUEEE DAMA						
BALANCE SHEET DATA: Cash, cash equivalents and short-term						
investments	\$ 3,510	\$15,469	\$ 7,033	\$15,849	\$ 23,760	
Working capital	10,983	32,647	18,409	26,061	42,687	
Total assets	50,167	75,423	65,253	76,929	106,681	
Long-term debt, including current portion  Stockholders' equity	8,083 27,674	2,897 57,533	6,545 43,386	3,501 55,822	1,625 81,014	
4 4		,				

# MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

All statements, trend analysis and other information contained in the following discussion relative to markets for our products and trends in sales, gross profit and anticipated expense levels, as well as other statements, including words such as "may," "will," "anticipate," "believe," "plan," "estimate," "expect" and "intend" and other similar expressions constitute forward-looking statements. These forward-looking statements are subject to business and economic risks and uncertainties, and our actual results of operations may differ materially from those contained in the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in "risk factors" as well as other risks and uncertainties referenced in this prospectus.

# OVERVIEW

We design, develop, manufacture and market proprietary radio frequency, microwave frequency and millimeter wave frequency integrated circuits and discrete semiconductors for wireless voice and data communications. Historically, we have focused on two operating divisions: Alpha Microwave and Trans-Tech. During fiscal 1998, we reorganized the Alpha Microwave division into two groups, Wireless Semiconductor Products and Application Specific Products, in order to address the distinct dynamics of different markets. Trans-Tech has been designated the Ceramic Products Group. Our operations are currently organized into three reportable segments:

The Wireless Semiconductor Products Group supplies GaAs integrated circuits and discrete semiconductors in high volume for wireless telephone handsets and wireless data applications. This group represented 52.1% of our total sales in fiscal 1999.

The Application Specific Products Group supplies radio frequency, microwave frequency and millimeter wave frequency GaAs integrated circuits, and discrete semiconductors and components for customized products in the satellite communications, broadband data and defense markets. This group represented 27.7% of our total sales in fiscal 1999.

The Ceramics Products Group uses electrical ceramic and ferrite technologies to supply resonators and filters, primarily for wireless base station equipment. This group represented 20.2% of our total sales in fiscal 1999.

We derived approximately 83% of our sales in fiscal 1999 from standard and custom designed products sold to the commercial market. The remaining sales are derived from sales to defense customers. Over the past several years, we have continued to reduce our reliance on defense business to increase our emphasis on the commercial wireless market. Sales are recognized when a product is shipped and services are performed.

Our customers include leading OEMs in the wireless communications industry and their principal suppliers. During fiscal 1999, sales to our 15 largest customers accounted for 64.3% of our total sales. During that period, sales to Motorola accounted for 28.1% of total sales and sales to Ericsson accounted for 8.2% of total sales.

#### RESULTS OF OPERATIONS

The following table shows our statement of operations data expressed as a percentage of sales for the periods indicated:

		YEARS ENDED	
	1997	MARCH 29, 1998	1999
Sales Cost of sales			
Gross margin	11.2	37.7 8.6 19.1	43.7 10.2 18.0
Operating income (loss) Other income (expense), net		10.0 (0.2)	15.5 0.5
Income (loss) before income taxes	(18.3)		16.0 (1.0)
Net income (loss)	(18.3)%	8.8%	17.0%

=====

FISCAL YEARS ENDED MARCH 28, 1999, MARCH 29, 1998 AND MARCH 30, 1997

Sales. Sales increased 8.1% to \$126.3 million in fiscal 1999 from \$116.9 million in fiscal 1998. The increase was primarily attributable to increased demand for wireless products and our penetration into additional handset platforms. Deliveries to Motorola represented 28.1% of our total sales in fiscal 1999 compared to 24.7% in fiscal 1998. We continued to increase our focus on the commercial wireless markets, which lowered our defense sales to 17.2% in fiscal 1999 from 17.6% in fiscal 1998. We continue to participate in defense programs that require minimal investment.

Sales increased 37.1% to \$116.9 million in fiscal 1998 from \$85.3 million in fiscal 1997. The increase in sales was largely due to greater volume resulting from increased penetration into several handset platforms. Deliveries to Motorola represented 24.7% of our total sales in fiscal 1998 compared to 10.6% in fiscal 1997. Defense sales represented 17.6% of total sales in fiscal 1998 compared to 20.8% in fiscal 1997.

Gross Profit. Gross profit increased 25.2% to \$55.2 million in fiscal 1999 from \$44.1 million in fiscal 1998. Gross margin increased to 43.7% in fiscal 1999 from 37.7% in fiscal 1998. These increases were primarily a result of improved operating efficiencies in all three business segments, particularly in Wireless Semiconductors, which continued to leverage capacity, improve yields and reduce material costs.

Gross profit increased 163.4% to \$44.1 million in fiscal 1998 from \$16.7 million in fiscal 1997. Gross margin increased to 37.7% in fiscal 1998 from 19.6% in fiscal 1997. Excluding certain non-recurring costs, gross margin would have been 26.7% in fiscal 1997. The following non-recurring costs were included in fiscal 1997 gross profit: (1) excess manufacturing capacity in the Ceramics group that was reduced in the fourth quarter with the divestiture of the group's French subsidiary and consolidation in this Group; (2) carrying costs of approximately \$2.7 million for divested operations (incurred prior to divestiture); and (3) a \$2.6 million inventory write-down in Ceramics resulting from shifts in demand away from certain ceramic products. In addition, we continued expanding capacity for Wireless Semiconductors during fiscal 1997 despite lower sales volumes for the first half of the year. The gross margin improvement in fiscal 1998 was attributable to increased sales volume and the leveraging of capacity of our Wireless Semiconductor operation, as well as reduced manufacturing costs and improved operating efficiencies in our Ceramics Group.

Research and Development Expenses. Research and development expenses increased 28.4% to \$12.9 million or 10.2% of sales in fiscal 1999 from \$10.0 million or 8.6% of sales in fiscal 1998. The increase in

research and development expenses was primarily attributable to the development of processes and products in the Wireless Semiconductor Products Group. Over 75% of our total research and development expenses in fiscal 1999 and 1998 were focused on the Wireless Semiconductor Products Group's efforts in developing GaAs integrated circuits and other high volume wireless products.

Research and development expenses increased 5.1% to \$10.0 million or 8.6% of sales in fiscal 1998 from \$9.5 million or 11.2% of sales in fiscal 1997. The increase in research and development expenses was the result of increased investments in the Wireless Semiconductor operation offset by decreases in investment in our Ceramics Group during the rebuilding of its business.

Selling and Administrative Expenses. Selling and administrative expenses increased 1.8% to \$22.8 million or 18.0% of sales in fiscal 1999 from \$22.4 million or 19.1% of sales in fiscal 1998. The increase in selling and administrative expenses was attributable to increased sales commissions resulting from higher sales volumes, while the decrease in selling and administrative expenses as a percentage of sales was attributable to our continued efforts to control administrative costs.

Selling and administrative expenses increased 9.4% to \$22.4 million or 19.1% of sales in fiscal 1998 from \$20.4 million or 24.0% of sales in fiscal 1997. Selling and administrative expenses in fiscal 1997 included non-recurring costs of approximately \$1.5 million for recruiting and consolidation costs for our Ceramics Products Group and for severance costs. The increased selling and administrative expenses reflect the continued investment in sales, marketing and administrative activities. Significant components of the increase included the addition of dedicated account managers for key wireless OEMs, improvements to our information systems, training costs and recruiting costs for key positions.

Other Income (Expense), Net. Interest expense in fiscal 1999 decreased \$204,000 compared to fiscal 1998 due to a decline in outstanding borrowings. Interest income in fiscal 1999 increased \$597,000 as a result of higher levels of cash, cash equivalents and short-term investments. Other expenses decreased \$110,000 in fiscal 1999 compared to fiscal 1998 due to losses resulting from the disposal of equipment in fiscal 1998.

Interest expense in fiscal 1998 decreased \$83,000 compared to fiscal 1997 as a result of a lower level of outstanding borrowings. Other expenses increased \$59,000 in fiscal 1998 compared to fiscal 1997 due to losses resulting from the disposal of equipment in fiscal 1998.

Provision (Benefit) for Income Taxes. The benefit for income taxes in fiscal 1999 was \$1.3 million compared to a provision for income taxes of \$1.1 million in fiscal 1998. The fiscal 1999 benefit reflects a 10% tax rate offset by a \$3.3 million tax benefit recorded in the fourth quarter of fiscal 1999. The tax benefit of \$3.3 million resulted from a reduction in the valuation allowance against deferred tax assets because of the expected use of net operating loss carryforwards in future periods. We will begin reporting income at a fully taxed rate, assumed to be 36%, during the first quarter of fiscal 2000, which ends in June 1999.

The provision for income taxes in fiscal 1998 was \$1.1 million. Our effective tax rate for fiscal 1998 was 10% due to the utilization of net operating loss carryforwards. We did not record a tax provision for fiscal 1997. No federal taxes were due, and state and foreign taxes were offset by a state loss carryback.

# BUSINESS SEGMENTS

The table below displays sales and operating income by business segment for fiscal 1998 and 1999. See Note 10 to the consolidated financial statements. It is not practicable to present information for fiscal 1997 because such information for that year is not available.

YEARS ENDED

	MARCH 29, 1998	MARCH 28, 1999
Sales		
Wireless Semiconductor Products	\$ 52,612	\$ 65,822
Application Specific Products	37,118	34,977
Ceramic Products	27,151	25,540
	\$116,881	\$126,339
	======	=======
Operating Income		
Wireless Semiconductor Products	\$ 2,799	\$ 7,435
Application Specific Products	7,210	10,241
Ceramic Products	1,679	1,879
	\$ 11,688	\$ 19,555
	=======	=======

Wireless Semiconductor Products. Sales for the Wireless Semiconductor Products Group increased 25.1% to \$65.8 million in fiscal 1999 from \$52.6 million in fiscal 1998. The increase was primarily attributable to increased demand for wireless products and our penetration into additional handset platforms.

Operating income for the Wireless Semiconductor Group increased 165.6% to \$7.4 million in fiscal 1999 from \$2.8 million in fiscal 1998. The increase in operating income was primarily attributable to improved operating efficiencies. This Group continued to leverage capacity, improve yields and reduce material costs. In addition, this Group focused on the development of processes and products for the wireless market, while continuing efforts to control administrative costs.

Application Specific Products. Sales for the Application Specific Products Group decreased 5.8% to \$35.0 million in fiscal 1999 from \$37.1 million in fiscal 1998. The decrease was primarily attributable to our increasing focus on the commercial market and a continuing shift away from the defense market.

Operating income for the Application Specific Products Group increased 42.0% to \$10.2 million in fiscal 1999 from \$7.2 million in fiscal 1998. The increase in operating income was primarily attributable to improved operating efficiencies, including improved yields and reduced material costs. In addition, the Group's selling and administrative activities were significantly reduced as the Group focused on controlling costs.

Ceramic Products. Sales for the Ceramics Group decreased 5.9% to \$25.5 million in fiscal 1999 from \$27.2 million in fiscal 1998. The decrease was primarily attributable to a decreased level of sales for the first half of fiscal 1999 mainly due to lower than expected demand for wireless infrastructure and price competition from Japanese competitors whose currency declined in value against the U.S. dollar.

Operating income for the Ceramics Group increased 11.9% to \$1.9 million in fiscal 1999 from \$1.7 million in fiscal 1998. The increase in operating income was primarily attributable to the reduction of material costs and improved operating efficiencies, including the leveraging of capacity and increased manufacturing automation.

# QUARTERLY RESULTS OF OPERATIONS

The following table shows unaudited quarterly results of operations in dollar amounts and as a percentage of sales for the periods indicated. We have prepared this information on a basis consistent with our audited consolidated financial statements and included all adjustments that we consider necessary for a fair presentation of the information for the periods presented. Results of operations for any fiscal quarter are not necessarily indicative of results for any future period.

# THREE MONTHS ENDED

	JUNE 29, 1997	SEPT. 28, 1997	DEC. 28, 1997	MARCH 29, 1998	JUNE 28, 1998	SEPT. 27, 1998	DEC. 27,	MARCH 28, 1999
				OUSANDS, EXC				
STATEMENT OF OPERATIONS DATA: Sales	\$25,705 16,808	\$28,571 17,942	\$30,751 18,928	\$31,854 19,121	\$29,955 17,132	\$29,626 16,763	\$32,489 18,151	\$34,269 19,085
Gross profit	8,897	10,629	11,823	12,733	12,823	12,863	14,338	15,184
expenses	2,319	2,422	2,545	2,749	3,022	2,891	3,397	3,576
expenses	5,262	5 <b>,</b> 513	5,684	5 <b>,</b> 900	5,497	5,422	5 <b>,</b> 809	6,039
Operating incomeOther income (expense), net	1,316 (83)	2,694 (89)	3,594 (87)	4,084 18	4,304 112	4,550 134	5,132 170	5,569 254
Income before income taxes  Provision (benefit) for income	1,233	2,605	3,507	4,102	4,416	4,684	5,302	5,823
taxes	123	261	351	410	442	468	530	(2,705)
Net income	\$ 1,110 =====	\$ 2,344 ======	\$ 3,156 =====	\$ 3,692 =====	\$ 3,974 ======	\$ 4,216 ======	\$ 4,772 ======	\$ 8,528 ======
Net income per share:								
Basic	\$ 0.07	\$ 0.15	\$ 0.20	\$ 0.24	\$ 0.25	\$ 0.27	\$ 0.30	\$ 0.54
Diluted	\$ 0.07	\$ 0.15 =====	\$ 0.20 =====	\$ 0.23 =====	\$ 0.25 =====	\$ 0.26 =====	\$ 0.29 =====	\$ 0.51 =====
Shares used in per share calculation	n:							
Basic	14,987	15,207	15,420	15,593	15,708	15,772	15,835 ======	15,980
Diluted	15,233 ======	15,654 =====	15,961 =====	16,012 =====	16,098 =====	16,131 ======	16,402 ======	16,769 =====

# THREE MONTHS ENDED

	JUNE 29, 1997	SEPT. 28, 1997	DEC. 28, 1997	MARCH 29, 1998	JUNE 28, 1998	SEPT. 27, 1998	DEC. 27, 1998	MARCH 28, 1999
Sales Cost of sales	100.0% 65.4	100.0% 62.8	100.0%	100.0%	100.0% 57.2	100.0%	100.0% 55.9	100.0%
Gross margin	34.6	37.2	38.4	40.0	42.8	43.4	44.1	44.3
Research and development expenses	9.0	8.5	8.3	8.6	10.1	9.8	10.5	10.4
expenses	20.5	19.3	18.5	18.5	18.4	18.3	17.9	17.6
Operating income Other income (expense), net	5.1 (0.3)	9.4 (0.3)	11.7	12.8	14.4	15.4 0.5	15.8 0.5	16.3 0.7
Income before income taxes  Provision (benefit) for income	4.8	9.1	11.4	12.9	14.7	15.8	16.3	17.0
taxes	0.5	0.9	1.1	1.3	1.5	1.6	1.6	(7.9)
Net income	4.3% =====	8.2% =====	10.3%	11.6% =====	13.3%	14.2% =====	14.7% =====	24.9% =====

### LIQUIDITY AND CAPITAL RESOURCES

As of March 28, 1999, we had working capital of \$42.7 million, including \$23.8 million in cash, cash equivalent and short term investments. In fiscal 1999, operations generated \$25.6 million of cash primarily attributable to net income of \$21.5 million. Uses of cash included \$17.7 million for capital expenditures, \$8.2 million for net purchases of short term investments and \$1.9 million for the repayment of long-term debt. We continued our investment in capital expenditures particularly for the semiconductor GaAs wafer fabrication operation and the integrated circuit and discrete semiconductor assembly and test areas, as well as for improved manufacturing capabilities at the ceramics manufacturing facility.

During fiscal 1999, we incurred capital expenditures of \$17.7 million of which \$14.3 million was related to the Wireless Semiconductor Products Group. The expenditures for this group related primarily to the expansion of the GaAs fabrication facility which is estimated to cost \$18 million in total and is scheduled to be completed during the summer of 1999. This expansion is expected to significantly increase capacity.

We may use a portion of the net proceeds of this offering for the purchase of equipment, the expansion of facilities and the acquisition of businesses, technologies or products that complement our business. From time to time we have discussed strategic acquisitions with third parties. We are not currently in discussions regarding acquisitions and have no agreements or commitments to complete an acquisition.

We maintain a \$7.5 million working capital line of credit and a \$7.5 million equipment line of credit which expire on September 30, 1999. We expect to renew these agreements. There are no outstanding borrowings under these agreements.

We believe that anticipated cash from operations, available funds and borrowings under our bank lines of credit, together with the net proceeds from the sale of our common stock in this offering, will be adequate to fund our currently planned working capital and capital expenditure requirements through fiscal 2000.

### YEAR 2000 READINESS

The Year 2000 issue relates to the inability of certain computer software programs to properly recognize and process date sensitive information relative to the Year 2000 and beyond. To address this issue, we have initiated a company-wide Year 2000 project under the direction of senior management. We have evaluated our products and have determined that our products are not date sensitive. We do not expect Year 2000 exposure for products sold.

We have completed a comprehensive inventory of our internal information systems. Over the last several years, we have invested in new computer hardware and software to improve our business operations. All such systems were required to be Year 2000 compliant as a condition of purchase. We have completed testing of our critical information systems. As a result of this testing, we do not believe that any critical systems will cause a significant interruption of our business. Certain systems require minor upgrades. These upgrades are expected to be completed by September 1999 and the costs are not expected to be material.

We have also completed a comprehensive inventory of our equipment and facilities. We have substantially completed testing of critical items to ensure that they are compliant. As a result of our testing to date, we do not believe that any critical items will result in a significant disruption to our business. Minor upgrades are planned for certain items. These upgrades are expected to be completed by September 1999 and the costs are not expected to be material.

We have completed formal communication with significant suppliers, customers, financial institutions and other third parties with which we have a material relationship in order to determine whether those entities have adequate plans in place to ensure their Year 2000 preparedness. As a result of our communications, we have not identified any issues with respect to these third parties.

At this time, we have not developed a "worst case" scenario or an overall contingency plan and do not intend to do so unless, as a result of ongoing testing and evaluation, we believe these plans are warranted. Based upon our assessment to date and our expectations that our Year 2000 project will be substantially complete by September 1999, we believe adequate time will be available to ensure

alternatives can be developed, assessed and implemented, if necessary, prior to a Year 2000 issue having a negative impact on our operations. However, we cannot assure that such modifications and conversions, if required, will be completed on a timely basis.

We have not prepared estimates of costs to remediate Year 2000 problems. However, based on currently available information, including the results of our assessment to date, we do not believe that the costs associated with Year 2000 compliance will have a material adverse effect on our business, results of operations or financial condition.

Although we believe our planning efforts are adequate to address our Year 2000 compliance concerns, we cannot guarantee that we will not experience unanticipated negative consequences or material costs caused by undetected errors or defects in the technology used in our internal systems or that third parties upon which we rely will not experience similar negative consequences.

#### BUSINESS

#### OVERVIEW

We design, develop, manufacture and market proprietary radio frequency, microwave frequency and millimeter wave frequency integrated circuits and discrete semiconductors for wireless voice and data communications. The primary applications for our products include wireless handsets for cellular and personal communication services, or PCS. We also produce integrated circuits, discrete components, electrical ceramics and ferrites used in wireless base station equipment, cable television, wireless local loop, wireless personal digital assistants and wireless local area networks.

We offer a broad range of products, including integrated circuit switches and controls, power amplifiers, diodes and components that comprise a significant part of the radio frequency devices used in wireless telephone handsets. We use a range of technologies, processes and materials to meet our customers' performance requirements, including gallium arsenide metal semiconductor field effect transistor, or GaAs MESFET, gallium arsenide pseudomorphic high electron mobility transistor, or GaAs PHEMT, silicon and electrical ceramic. We currently are developing power amplifiers and other devices made with a gallium arsenide heterojunction bipolar transistor, or GaAs HBT, process.

We divide our operations into three groups to address the distinct dynamics of different markets:

	WIRELESS SEMICONDUCTOR PRODUCTS	APPLICATION SPECIFIC PRODUCTS	CERAMIC PRODUCTS
Primary Products	GaAs Integrated Circuits Discrete Semiconductors	GaAs Integrated Circuits Discrete Semiconductors Components	Electrical Ceramics Ferrites
Primary Markets	Wireless Handsets Wireless Data	Satellite Communications Broadband Data, Defense	Wireless Infrastructure

The Wireless Semiconductor Products Group supplies GaAs integrated circuits and discrete semiconductors in high volume for wireless telephone handsets and wireless data applications. These products are used in equipment incorporating the leading digital standards, Global System for Mobile Communications, or GSM, Code Division Multiple Access, or CDMA and Time Division Multiple Access, or TDMA. This group generated \$65.8 million or 52.1% of our total sales in fiscal 1999.

The Application Specific Products Group supplies radio frequency, microwave frequency and millimeter wave frequency GaAs integrated circuits, and discrete semiconductors and components for customized products in the satellite communications, broadband data and defense markets. We leverage our 30 years of experience with higher frequency microwave and millimeter wave technologies to develop high gross margin products and to develop new products for emerging wireless broadband data applications. This group generated \$35.0 million or 27.7% of our total sales in fiscal 1999.

The Ceramics Products Group uses electrical ceramic and ferrite technologies to supply resonators and filters, primarily for wireless base station equipment. This group generated \$25.5 million or 20.2% of our total sales in fiscal 1999.

# INDUSTRY BACKGROUND

Market Growth. The wireless communications industry has grown rapidly as new technologies, additional radio frequency spectrum and competition have made wireless communications easier, as well as more useful, available and affordable. Wireless product original equipment manufacturers, or OEMs, continue to make their products smaller, add capabilities and increase the standby and talk times of their battery operated products. As a result, new product introductions have become more frequent.

We expect the market for wireless handsets, a key element of the wireless communications industry, to continue experiencing significant growth. Industry analysts expect sales of wireless handsets to grow from 163 million units in 1998 to approximately 257 million units in 2000, representing a 25% compound annual growth rate. We believe the introduction of new handset features, new and less expensive service plans and new markets in developing countries are driving this sales growth.

Consumer wireless applications are expanding from voice-only to many different forms of data transmission. We expect that the next generation air interface standard will be designed with data transmission as a primary function. A variety of applications enabling wireless access to the Internet and e-mail, as well as wireless home automation, are under development. Many of these new wireless data applications need more bandwidth, or capacity, than voice, and current cellular and PCS frequencies limit the available bandwidth. Higher frequencies, in the millimeter wave range where there is less traffic, allow much higher bandwidths. Consequently, the Federal Communications Commission has allocated millimeter wave frequencies for wireless data applications. We believe GaAs millimeter wave semiconductor and component technology will be necessary for the development of products for these wireless voice and data applications.

Frequency Bands and Air Interface Standards. First generation wireless telephone systems, such as Advanced Mobile Phone Service, use analog signal processing and operate at frequencies from 829 to 894 MHz, with limited capacity, sound quality and capabilities. Second generation systems use digital signal processing and operate at either cellular frequencies ranging from 869 to 894 MHz or at PCS frequencies ranging from 1930 to 1990 MHz. There are a number of digital air interface standards in these frequency bands, including GSM, TDMA and CDMA. These digital standards provide improved capacity, sound quality and capabilities at cellular and PCS frequency bands, but are incompatible and have fragmented the market for equipment.

Cellular System Infrastructure. Wireless telephones communicate with base stations, sometimes referred to as cell sites. These base stations transmit and receive signals from handsets and, after processing, connect the signals to the local switching office of the wireline telephone system or some other telecommunications network. Digital radios with a millimeter wave carrier frequency are being used to connect base stations to each other and to these networks. The handsets and base stations designed for each air interface standard generally require custom radio frequency semiconductor solutions.

To enable consumers to use their handsets across various territories and interface standards, suppliers of wireless handsets have begun to offer multimode and multiband handsets. Multimode handsets can switch from one air interface standard to another. Multiband handsets can switch from one frequency band to another. The trend to multimode and multiband functions is increasing the number of radio frequency products necessary for each handset. For example, some new handsets need as many as five integrated circuit switches and two power amplifiers.

As a result of rapid market growth, technical challenges and end user demands as well as a shortage of radio frequency integrated circuit engineers, we believe it has become difficult for OEMs of subscriber equipment to develop and supply all their required radio frequency devices in a timely and cost-effective manner. This has caused some OEMs to rely on third party suppliers for these products. We also believe that many new entrants to the wireless subscriber equipment market, such as large consumer electronics companies, are less vertically integrated than established OEMs. As a result, these companies tend to rely even more on third party suppliers.

GaAs and Silicon Technology. In first generation wireless communications equipment, silicon-based semiconductors were used to form complex circuits to transmit and receive radio frequency signals. The use of silicon integrated circuits at cellular and PCS frequencies has been limited because of decreased operating performance. At cellular and PCS frequencies, silicon integrated circuits consume more power, have relatively higher noise and distortion parameters and create excess heat. However, certain discrete silicon semiconductor devices remain the most cost-effective solution for certain functions in wireless handsets.

GaAs has inherent physical properties that permit GaAs devices to operate at much higher speeds than silicon devices or at the same speeds with lower power consumption. This is particularly important in battery powered portable applications such as handsets. Moreover, silicon devices do not perform well at higher frequencies such as millimeter wave. Accordingly, GaAs semiconductor technology has emerged as an effective alternative or complement to silicon technology in many high performance radio frequency, microwave frequency and millimeter wave frequency applications.

GaAs Process Technologies. Most commercial GaAs integrated circuits and discrete semiconductors are made using the GaAs MESFET process. New GaAs processes however, such as GaAs PHEMT and HBT, offer many advantages over the MESFET process. GaAs PHEMT and HBT devices have been developed over the past decade for defense applications. They are now being applied to the manufacture of commercial GaAs devices. GaAs devices made with the PHEMT and HBT processes offer higher power efficiency, although HBT is not suitable for switching. The different cost and performance characteristics of silicon and the various GaAs process technologies can each be useful in an OEM's wireless platform design strategy. We believe it is important that suppliers of GaAs integrated circuits and discrete semiconductors have the breadth of technologies and production capabilities to be able to provide an OEM customer with its desired solution.

### THE ALPHA APPROACH

Our goal is to be the leading provider of radio frequency, microwave frequency and millimeter wave frequency products for a broad range of commercial wireless markets. The key elements of our approach are:

- Continue Focus on Wireless Markets. Much of our recent growth in revenue and profits has been due to our intense concentration on the expanding demand for wireless telephony equipment, particularly handsets. By including multimode or multiband capabilities, handsets have become more complex and contain two to three times more radio frequency products than prior generation products. Industry analysts expect unit sales of handsets to grow at a compound rate of approximately 25.0% per year through 2000. We also expect the introduction of many new wireless data applications, including those which merge voice and data into the same handset. Wireless data products include personal digital assistants with wireless Internet access. We believe that the trends of increased complexity and of market growth in handsets and wireless data applications will combine to create opportunity for continued growth.
- Continue Focus on Wireless Industry Leaders. We focus our sales and marketing efforts on dominant OEMs in the wireless communications industry and their principal suppliers. Two of the three largest producers of handsets in the world, Motorola and Ericsson, were our largest customers in fiscal 1999, representing 36.3% of our sales in this period. We have assigned a senior key account executive to each of these key customers. The task of these key account personnel is to coordinate all activities needed to support that customer on a worldwide basis. By remaining in close contact with our customers' design engineering, manufacturing, purchasing and project management personnel, we can better understand their needs, rapidly develop customer specific solutions and successfully design our solutions into our customers' new products. We emphasize rapid new product development to meet our customers' shortening development cycles. Our manufacturing capabilities enable us to quickly convert new products from development to full production. During calendar 1998, we increased our penetration from 25 products for 13 handset platforms to 74 products for 35 handset platforms.
- Provide a Broad Array of Products. We offer a broad array of radio frequency, microwave frequency and millimeter wave frequency products to the wireless markets, including GaAs integrated circuits switches and controls, GaAs integrated circuits power amplifiers, silicon discrete diodes and ceramic resonators and filters. We continue to expand our product breadth, allowing us to increase the total value of the content we offer for each handset. The technologies underlying this product portfolio allow us to address the new wireless data communications products being developed with limited incremental investment. As the OEMs in the wireless communications

industry have been reducing the number of their suppliers, our product portfolio has helped us become a strategic supplier to Motorola and Ericsson.

- Maintain High Volume, Efficient Manufacturing. We believe we have a cost-effective GaAs integrated circuit fabrication facility. We manage our design and manufacturing processes to meet our customers' rapid delivery requirements. We combine rigorous statistical control methods developed in the high volume silicon integrated circuit industry with our own total quality management philosophy to improve our yields and consistency and lower our costs. Molecular beam epitaxy layer growth, or MBE, is a critical factor in the PHEMT and HBT process of GaAs integrated circuit production. As GaAs integrated circuit production moves from the MESFET process toward PHEMT and HBT processes, we expect in-house MBE capability will become a more important competitive factor, because it is more costly to outsource MBE. Unlike many of our competitors, we have a large, in-house MBE facility, backed by many years of experience.
- Pursue Strategic Technology Alliances and Acquisitions. We intend to pursue strategic alliances and acquisitions to expand our production capacity, products, technologies, industry expertise and customers. We expect that our alliances and acquisitions will be complementary to our current business. In February 1999, we formed a strategic alliance with Infinesse Corporation for the design of GaAs HBT process products. We believe the development of GaAs HBT technology will open additional power amplifier markets to us and complement our existing strength in GaAs PHEMT and GaAs MESFET. We plan to introduce our initial GaAs HBT products for OEM qualification during the summer of 1999.

### PRODUCTS AND APPLICATIONS

We offer a broad array of radio frequency, microwave frequency and millimeter wave frequency products to the wireless markets, including GaAs integrated circuit switches and controls, GaAs integrated circuit power amplifiers, silicon discrete semiconductors and ceramic resonators and filters. A typical end product for wireless communications, such as a handset, contains radio frequency, baseband and digital signal processing components. Radio frequency components convert, switch, process and amplify the high frequency signals that carry the information to be transmitted or received. Baseband components process signals into and from their original electrical form (low frequency voice or data). The digital components control the overall circuitry and process the voice or other data to be transmitted and received.

The table below identifies the major product categories and markets our three operating groups serve.

	WIRELESS SEMICONDUCTOR PRODUCTS			A DDI TOARTON	
MARKETS	POWER AMPLIFIERS	INTEGRATED CIRCUIT SWITCHES	DISCRETE	SPECIFIC	CERAMIC PRODUCTS
Cellular/PCS: Handset Base Station					
Wireless Data: Narrowband Broadband		  	  		 
Cable TV					
Other Wireless					

Other Wireless includes wireless local loop, digital radio links, Global Positioning Systems, or GPS, Direct Broadcast Satellite, or DBS, intrusion alarms, radar detectors, ID tags and defense applications.

#### WIRELESS SEMICONDUCTOR PRODUCTS

The diagram below illustrates the role of many of our Wireless Semiconductor Products in a dual band and dual mode wireless telephone handset.

[Cell-phone schematic]

Alpha Products in a Typical Dual Bond/Dual Mode Handset

GaAs Radio Frequency Integrated Circuit Switches GaAs Radio Frequency Power

Amplifiers Discrete Semiconductors

There is a picture of a cellular telephone on the right side of the page. To the left of the telephone is a diagram depicting various parts of a dual band/dual mode handset and identifying those parts which we supply.

- Power Amplifiers. Wireless communications systems require amplification in receiving and transmitting signals. Relatively weak incoming signals must be amplified without adding background noise. GaAs power amplifiers are used in handsets because they use battery power more efficiently than silicon amplifiers, and battery life is a critical system feature in these portable applications. Our 3-volt GaAs MESFET power amplifier, which extends battery life, has been in production for the last 18 months. Further efficiency improvement in amplifiers is now available using GaAs PHEMT process technology. In addition, we are developing GaAs HBT process technology, which we believe will open new power amplifier markets to us and complement our existing strength in the GaAs PHEMT and GaAs MESFET processes.
- Integrated Circuit Switches and Controls. Switching and control functions route and adjust signal levels between the receiver and transmitter and other processing devices. The number of switching functions increases with the complexity of the handset design. In the dual band/dual mode handset illustrated, the switches perform three different routing functions, including: signal routing to transmitter or receiver; signal routing to cellular or PCS frequency; and signal routing to digital or analog mode.

Our GaAs integrated circuit switches are used in handsets to provide lower signal loss and better signal isolation than comparable silicon products. Further improvements are now available using the GaAs PHEMT process. Transistors using the GaAs HBT process have not been suitable for switches.

- Discrete Semiconductors. Discrete semiconductors, especially diodes, are used for signal tuning and switching functions in the handset. We draw on our microwave frequency and millimeter wave frequency experience to produce diodes with better circuit performance. We manufacture these products in very high volumes and some of them are often purchased on a sole source basis from us.

### APPLICATION SPECIFIC PRODUCTS

We offer customized products that address all transmit and receive functions for radio frequency, microwave frequency and millimeter wave frequency applications, primarily in the satellite communications, broadband data and defense markets. The millimeter wave applications are an emerging area of broadband, high capacity data wireless services, such as Internet access. Systems operating in this frequency range must use GaAs.

### CERAMIC PRODUCTS

Our ceramic products play a critical role in the signal selection, or filtering process, that is essential to processing communications signals. Ceramic materials allow for improved power efficiency and miniaturization, which are being increasingly used in wireless communications infrastructure. Ceramic products are also critical in the frequency-determining portions of DBS receivers, radar detectors and intrusion alarms.

### CUSTOMERS

Our customers include leading OEMs in the wireless communications industry and their principal suppliers. During fiscal 1999, sales to our 15 largest customers accounted for approximately 64.3% of our total sales. During that period, sales to Motorola accounted for 28.1% of total sales, and sales to Ericsson accounted for 8.2% of total sales.

# SALES AND MARKETING

We sell our products through independent manufacturers' representatives and through a direct sales staff. We sell through 12 domestic and 23 international independent manufacturers' representative organizations. Our field support management staff oversees our manufacturers' representatives and provides them with sales direction and support. Our direct sales staff manages key customer accounts and worldwide customer support and identifies and targets sales in the emerging wireless data markets.

We maintain an internal marketing organization that is responsible for developing sales and advertising literature, such as product announcements, catalogs, brochures and magazine articles in trade and other publications. Our internal marketing organization also prepares technical presentations for industry conferences.

We believe that the technical and complex nature of our products and markets demands an extraordinary commitment to close ongoing relationships with our customers. We strive to maintain close contact with our customers' design, engineering, manufacturing, purchasing and project management personnel. We employ a team approach in developing close relationships by combining the support of design and applications engineers, manufacturing personnel, sales and marketing staff and senior management. We believe that maintaining close contact with our customers improves their level of satisfaction, assists us in anticipating their future product needs and enhances our opportunities for design wins.

# MANUFACTURING

# MANUFACTURING CAPABILITIES

Our Wireless Semiconductor Products Group and our Application Specific Products Group are located at our Woburn, Massachusetts manufacturing facility, which is ISO 9001 compliant. At this facility, we design, fabricate and test GaAs integrated circuits, and GaAs and silicon discrete semiconductors and components.

The fabrication of GaAs integrated circuits and semiconductor products is highly complex, requiring production in a highly controlled, clean environment. Minute impurities, difficulties in the fabrication process or defects in the masks used to print circuits on the wafer can cause a substantial percentage of the wafers to be rejected or numerous die on each wafer to be nonfunctional. In addition, the more brittle nature of GaAs wafers can result in higher processing losses. To maximize wafer yield and quality, we test our products at various stages in the fabrication process, continually monitor reliability and conduct numerous quality control inspections throughout the entire production process.

We have extensive expertise in manufacturing process technologies for GaAs integrated circuits, discrete silicon semiconductors and ceramic products. We combine rigorous statistical control methods developed in the high volume silicon integrated circuit industry with our own total quality management philosophy to improve our yields and consistency and lower our costs. We attempt to control all critical steps in the manufacturing process to shorten product design and manufacturing cycles and improve product quality. Many of our manufacturing process technologies are proprietary.

Our GaAs manufacturing capabilities include MESFET and PHEMT processes and we are currently developing GaAs HBT process capability. In addition, we have a large, in-house MBE facility with personnel with many years of process experience. Since MBE is critical to the PHEMT and HBT process of GaAs integrated circuit production, we believe MBE capabilities will allow us to leverage additional cost savings across both PHEMT and HBT product lines.

Our Ceramic Products Group, located at our facilities in Adamstown and Frederick, Maryland, manufactures, assembles, packages and tests our ceramic filters and resonators. Our ceramic manufacturing controls formulation, powder preparation, forming, firing and finishing, as well as value-added assembly of our ceramic products.

# SUBCONTRACTING ASSEMBLY AND PACKAGING

We have in-house assembly capabilities but we also use several subcontractors in Asia to wirebond and package very large volume orders of integrated circuits. Our policy is to have at least two assembly houses located in different countries for each assembly process. After assembly, the packaged products are returned by our subcontractors to our United States facilities for final testing in our automated production test facilities. We qualify our assembly contractors based on cost and quality. We monitor on an ongoing basis each subcontractor's processes by reviewing the subcontractor's quality control system, production process and statistical and reliability program.

# RAW MATERIALS AND EQUIPMENT

All of the raw materials and equipment used in the production of our products are available from multiple sources. However, currently we procure certain materials for our products from single or limited sources.

# PRODUCT AND PROCESS DEVELOPMENT

We are focusing our development efforts on new products, design tools and manufacturing processes in our Wireless Semiconductor Products group using our core technologies. We strive to improve existing product performance, improve design and manufacturing processes and reduce costs. We maintain close collaborative relationships with many of our customers to help us identify market demands and target our development efforts to meet those demands.

GaAs HBT Capabilities. We are developing our GaAs HBT process technology capability with a third party designer and a third party foundry of GaAs HBT technology. GaAs HBT process technology works at higher frequencies than traditional silicon semiconductors and requires less power to transmit signals. For cellular telephones, this permits smaller handsets and longer talk-time between battery charges. We plan to introduce our initial GaAs HBT products for OEM qualification during the summer of 1999. We believe that the addition of a line of GaAs HBT products will complement our existing GaAs PHEMT

and GaAs MESFET devices, enabling us to offer our customers the full range of currently available GaAs applications for use in wireless telephone handsets and wireless data applications.

Millimeter Wave Technology. We developed much of our millimeter wave technology in connection with approximately 30 years of defense related contracts involving sophisticated millimeter wave semiconductor products. We use the techniques, processes and experience in millimeter wave technology developed in connection with these government programs for commercial applications.

Our development expenditures were 9.5 million for fiscal 1997, \$10.0 million for fiscal 1998 and \$12.9 million for fiscal 1999.

### COMPETITION

Wireless communications markets are intensely competitive and are characterized by rapid technological change, rapid product obsolescence and price erosion. We compete on the basis of price, performance, quality, reliability, size, ability to meet delivery requirements and customer service and support. Our primary competitors include multinational companies and a number of smaller companies.

In order to remain competitive, we plan to continue to expend significant resources on, among other things, new product development and enhancements, new process technologies and manufacturing efficiencies.

### ENVIRONMENTAL MATTERS

We are subject to a variety of federal, state and local requirements concerning the protection of the environment. We were notified by federal and state environmental agencies of our potential liability with respect to one Superfund site, to which small quantities of our hazardous waste were shipped. We believe that our volumetric contribution of waste to the Superfund site is minimal and that our liability will not be material, but we cannot guarantee this. During fiscal 1997, we settled a second, similar Superfund site claim for a nominal amount. During fiscal 1999, we successfully completed costly remediation and monitoring efforts relating to groundwater contamination at our Maryland facility. We began those efforts in 1989, after entering into a consent decree with the State of Maryland Department of the Environment.

### INTELLECTUAL PROPERTY

We believe that the success of our business will depend more on the technical competence, creativity and manufacturing and marketing abilities of our employees than on patents, trademarks and other intellectual property rights. A significant aspect of our intellectual property is our process technology know-how. Our objective is to foster continuing technological innovation to maintain and protect our competitive position.

We rely primarily on trade secret laws, confidentiality procedures and licensing arrangements to protect our intellectual property rights. We enter into confidentiality and nondisclosure agreements with our service providers, customers, employees and others, and attempt to limit access to and distribution of our proprietary information.

# EMPLOYEES

As of March 28, 1999, we had approximately 935 employees, including 678 in manufacturing, 143 in engineering and development, 55 in marketing and sales, and 59 in administration and finance. Our employees do not have a collective bargaining agreement. We have not experienced any work stoppages. We consider our relations with our employees to be good.

# FACILITIES

We own our corporate headquarters located on nine acres of land in Woburn, Massachusetts. The Woburn facility consists of 158,000 square feet and is occupied by our Wireless Semiconductor Products and Application Specific Products Groups. To accommodate expected demand, we are expanding our capacity

within the structure of our existing facility without interruption of our production. We expect the expansion, including the cost of building improvements and the purchase of manufacturing equipment, to cost approximately \$18 million. We expect to complete the expansion during the summer of 1999.

We also own a 92,000 square foot facility in Adamstown, Maryland, which is our primary ceramic products manufacturing facility. In addition, we lease a 33,000 square foot facility in Frederick, Maryland for manufacturing ceramic filters.

#### MANAGEMENT

#### DIRECTORS AND EXECUTIVE OFFICERS

NAME	AGE	POSITION
George S. Kariotis	76	Chairman of the Board of Directors
Thomas C. Leonard	64	President, Chief Executive Officer and Director
Paul E. Vincent	51	Vice President, Treasurer and Chief Financial Officer
David J. Aldrich	41	Vice President
Richard Langman	52	Vice President, and President of Trans-Tech, Inc.
Jean-Pierre Gillard	55	Vice President
James C. Nemiah	45	Secretary, Corporate Counsel
Timothy R. Furey	41	Director
James W. Henderson	56	Director
Arthur Pappas	62	Director
Raymond Shamie	78	Director
Sidney Topol	74	Director

George S. Kariotis was Chairman of the Board and Chief Executive Officer from our inception in 1962 until 1978, and, from 1974 to 1978, he was also our Treasurer. From 1979 to 1983, Mr. Kariotis was the Secretary of Manpower Development and Economic Affairs for the Commonwealth of Massachusetts. He was re-elected Chairman of the Board in 1983 and Chief Executive Officer in 1985. Mr. Kariotis resigned as Chief Executive Officer in July 1986 while he campaigned for public office. He resumed his position as Chief Executive Officer in November 1986, and served in that capacity until 1991.

Thomas C. Leonard was elected our President and Chief Executive Officer in July 1996 and was elected a Director in August 1996. Mr. Leonard joined us in 1992 as a division General Manager. In 1994, he was elected a Vice President. Mr. Leonard has over 30 years experience in the microwave industry, having held a variety of executive and senior level management and marketing positions at M/A-COM, Inc., Varian Associates, Inc. and Sylvania.

Paul E. Vincent joined us as Controller in 1979 and has been Vice President and Chief Financial Officer since January 1997. Prior to joining us, Mr. Vincent worked at Applicon Incorporated and, prior to that, Arthur Andersen & Co. Mr. Vincent is a CPA.

David J. Aldrich joined us in 1995 as Vice President, Chief Financial Officer and Treasurer and currently serves as Vice President and General Manager of the Wireless Semiconductor group and the Application Specific Products group. From 1989 to 1995, Mr. Aldrich held senior management positions at M/A-COM, Inc., including Manager Integrated Circuits Active Products, Corporate Vice President Strategic Planning, Director of Finance and Administration, and Director of Strategic Initiatives with the Microelectronics Division. Mr. Aldrich is a Director of Microwave Power Devices, Inc., a manufacturer of microwave products.

Richard Langman joined us in January 1997 as Vice President and President and General Manager of our Trans-Tech, Inc. subsidiary. Prior to joining us, Mr. Langman worked for Coors Ceramics Company for 23 years, holding senior executive positions in operations and sales. Mr. Langman received his B.S. in Ceramic Engineering from Alfred University and his M.S. in Metallurgy and Material Science from Lehigh University.

Jean-Pierre Gillard joined us in 1992 as Manager of GaAs integrated circuit operations and has been Vice President of Business Development since June 1996. Before 1992, he held a number of management positions at M/A-COM, Inc. in both marketing and sales.

James C. Nemiah joined us in November 1995 as Corporate Counsel and Assistant Secretary. He was named Secretary in September 1996. Prior to joining us, Mr. Nemiah was Vice President, General Counsel and Clerk at American Science and Engineering, Inc. from 1987 to 1995.

Timothy R. Furey founded Oxford Associates in 1991 and has been its Chairman and Chief Executive Officer since then. Prior to 1991, Mr. Furey worked as a consultant with Boston Consulting Group, Inc., Strategic Planning Associates, Inc., Kaiser Associates and the Marketing Science Institute.

James W. Henderson has served as the President of Analytical Systems Engineering Corporation, a provider of expert systems and communications systems and services, since 1977. Mr. Henderson served as an Executive Vice President of Analytical Systems Engineering Corporation from 1976 to 1977 and as its Director of Systems Engineering from 1973 to 1976. Prior to joining Analytical Systems Engineering Corporation, Mr. Henderson was a design engineer for International Business Machines Corporation and a research and development program manager for the United States Air Force.

Arthur Pappas is the co-founder of Datel Systems, Inc., a manufacturer of data conversion products, Power General Corporation, a manufacturer of switching power supplies, and Metra-Byte Corporation, a manufacturer of measurement and control products for personal computers, and President and Chairman of Astrodyne Corp., a manufacturer of power supplies.

Raymond Shamie was the President of Shamie Management Corporation, an investment management and consulting company, from 1986 to 1995. Prior to 1986, Mr. Shamie was Chairman of the Board and Chief Executive Officer of Metal Bellows Corporation.

Sidney Topol is a Director of Public Broadcasting System, and President of The Topol Group, Inc., a consulting and investment company. Mr. Topol was a Director of Wandel & Golterman Technologies, Inc., a manufacturer of test instruments, from 1996 to 1998. Mr. Topol was President of Scientific-Atlanta, Inc. from 1971 to 1983, Chief Executive Officer from 1975 to 1987 and Chairman of the Board from 1978 to 1990. Prior to 1971, Mr. Topol held various executive positions with Raytheon Company.

Our Restated Certificate of Incorporation and Amended and Restated By-Laws provide for the division of the Board of Directors into three classes, each having a staggered three-year term of office. The term of one class expires each year. At each annual meeting of the stockholders following the initial classification, the directors elected to succeed those directors whose terms expire are designated as being the same class as the directors they succeed and are elected to hold office until the third succeeding annual meeting. Directors may be removed only for cause at a stockholders' meeting upon the vote of stockholders holding a majority of our common stock, or upon the vote of a majority of the directors then in office.

#### PRINCIPAL SHAREHOLDERS

The following table sets forth certain information regarding beneficial ownership of our common stock as of March 28, 1999, except as otherwise noted below, and as adjusted to reflect the sale of the shares offered hereby: (i) by each person known by us to own beneficially more than five percent of our common stock; (ii) by each Director; (iii) by each executive officer; and (iv) by all of our Directors and executive officers as a group. Except as otherwise indicated, the persons or entities listed below have sole voting and investment power with respect to all shares of common stock owned by them, except to the extent such power may be shared with a spouse.

	BENEFICIALLY TO THE O	OMMON STOCK OWNED PRIOR FFERING	SHARES OF COMMON STOCK BENEFICIALLY OWNED AFTER THE OFFERING(2)	
DIRECTORS AND EXECUTIVE OFFICERS(1)	NUMBER	PERCENT	NUMBER	PERCENT
David J. Aldrich	74,756	(*)	74,756	(*)
Timothy R. Furey	4,500	(*)	4,500	(*)
Jean-Pierre Gillard	17,842	(*)	17,842	(*)
James W. Henderson	1,000	(*)	1,000	(*)
George S. Kariotis	11,864	(*)	11,864	(*)
Richard Langman	61,179	(*)	61,179	(*)
Thomas C. Leonard	184,515	1.2%	184,515	1.0%
James C. Nemiah	6,862	(*)	6,862	(*)
Arthur Pappas	12,000	(*)	12,000	(*)
Raymond Shamie	28,500	(*)	28,500	(*)
Sidney Topol	44,500	( * )	44,500	(*)
Paul E. Vincent  Directors and Executive Officers as a	40,951	(*)	41,451	(*)
group (12 persons)	488,969	3.0%	488,969	2.6%
5% SHAREHOLDERS				
Harvey Kaylie and Gloria W. Kaylie(3) 13 Neptune Avenue, Brooklyn, NY 11235	2,079,450	13.0%	2,079,450	10.9%
FMR Corp.(4)	1,460,100	9.1%	1,460,100	7.7%
Westport Asset Management, Inc.(5) 253 Riverside Avenue Westport, CT 06880	1,346,925	8.4%	1,346,925	7.1%

<sup>\*</sup> Less than one percent.

<sup>(1)</sup> Includes certain shares for each listed individual and group as follows: Aldrich -- 2,053 shares in his account under our Savings and Retirement Plan (hereinafter referred to as the "401(k) Plan") and 67,500 shares subject to currently exercisable stock options; Gillard -- 2,536 shares in his account under the 401(k) Plan and 11,250 shares subject to currently exercisable stock options; Kariotis -- 5,582 shares in his account under our 401(k) Plan and 4,500 shares subject to currently exercisable stock options; Langman -- 60,000 shares subject to currently exercisable stock options; Leonard -- 3,207 shares in his account under the 401(k) Plan and 142,500 shares subject to currently exercisable stock options; Nemiah -- 1,244 shares in his account under the 401(k) Plan and 3,900 shares subject to currently exercisable stock options; Topol -- 4,500 shares subject to currently exercisable stock options; Vincent -- 4,420 shares in his account under the 401(k) Plan and 16,250 shares subject to currently exercisable stock options; Executive Officers and Directors as a Group -- 19,036 shares in accounts under the 401(k) Plan and 314,900 shares

subject to currently exercisable stock options. Directors and officers have voting power over the 19,036 shares listed in accounts under the 401(k) Plan.

- (2) Assumes the underwriters do not exercise their over-allotment option.
- (3) As reported in a Schedule 13D, as amended, dated December 28, 1998, Scientific Components Corporation, as of December 28, 1999, was the record and beneficial owner of 2,079,450 shares of our common stock. Harvey Kaylie and his wife, Gloria W. Kaylie, are each directors, officers and principal stockholders of Scientific Components Corporation, and may be deemed to be the beneficial owners of the shares held of record by Scientific Components Corporation. Mr. and Mrs. Kaylie have shared power to vote and dispose of all of the aforementioned shares
- As reported in a Schedule 13G dated February 1, 1999, Fidelity (4) Management & Research Company ("Fidelity"), a wholly-owned subsidiary of FMR Corp. and a registered investment adviser, is the beneficial owner of 1,449,000 shares of common stock as a result of acting as investment adviser to various registered investment companies. Edward C. Johnson 3d, FMR Corp., through its control of Fidelity, and the Fidelity Funds, each has sole power to dispose of the 1,449,000 shares owned by the Funds. Neither FMR Corp. nor Edward C. Johnson 3d, Chairman of FMR Corp., has the sole power to vote or direct the voting of the shares owned directly by the Fidelity Funds, which power resides with the Funds' Boards of Trustees. Fidelity Management Trust Company, a wholly-owned bank subsidiary of FMR Corp., is the beneficial owner of 11,100 shares of the common stock as a result of its serving as investment manager of institutional accounts. Edward C. Johnson 3d and FMR Corp., through its control of Fidelity Management Trust Company, each has sole dispositive power and sole power to vote or to direct the voting of the shares of common stock owned by the institutional accounts. Through their ownership of voting common stock and the execution of a shareholders' voting agreement, members of the Edward C. Johnson 3d family and trusts for their benefit may be deemed to be a controlling group with respect to FMR Corp.
- (5) As reported in a Schedule 13G dated February 16, 1999, in which Westport Asset Management, Inc. claimed sole voting and dispositive power with respect to 1,350 shares and shared voting and dispositive power with respect to 897,050 shares. Westport Asset Management, Inc. is a registered investment advisor. The 1,345,575 shares reported are held in certain discretionary managed accounts of Westport Asset Management, Inc., and the 1,350 shares reported are owned by officers and stockholders of Westport Asset Management, Inc. Westport Asset Management, Inc. disclaims beneficial ownership with respect to the shares reported in the filing.

#### CERTAIN TRANSACTIONS

One of our customers is affiliated with one of our major stockholders, Scientific Components Corporation. Harvey Kaylie and his wife Gloria W. Kaylie are each directors, officers and principal stockholders of Scientific Components Corporation. The customer accounted for 5.9% of our total sales for fiscal 1999. Scientific Components Corporation is currently the owner of 13% of our common stock. We believe that all transactions with this customer have been negotiated at arms-length and have been on terms and conditions as favorable to us as we could have obtained in transactions with an unrelated third party.

UNDERWRITER

#### UNDERWRITING

We will enter into an underwriting agreement with the underwriters named below. CIBC World Markets Corp., Prudential Securities Incorporated and U.S. Bancorp Piper Jaffray Inc. are acting as representatives of the underwriters. The underwriting agreement provides for the purchase of a specific number of shares of common stock by each of the underwriters. The underwriters' obligations are several, which means that each underwriter is required to purchase a specified number of shares, but is not responsible for the commitment of any other underwriter to purchase shares. Subject to the terms and conditions of the underwriting agreement, each underwriter will severally agree to purchase the number of shares of common stock set forth opposite its name below:

CIBC World Markets Corp	
Total	

NUMBER OF SHARES

This is a firm commitment underwriting. This means that the underwriters will agree to purchase all of the shares offered by this prospectus (other than those covered by the over-allotment option described below) if any are purchased. Under the underwriting agreement, if an underwriter defaults in its commitment to purchase shares, the commitments of non-defaulting underwriters may be increased or the underwriting agreement may be terminated, depending on the circumstances.

The representatives have advised us that the underwriters propose to offer the shares directly to the public at the public offering price that appears on the cover page of this prospectus. In addition, the representatives may offer some of the shares to certain securities dealers at such price less a concession of  $\$  per share. The underwriters may also allow, and such dealers may reallow, a concession not in excess of  $\$  per share to certain other dealers. After the shares are released for sale to the public, the representatives may change the offering price and other selling terms at various times.

We have granted the underwriters an over-allotment option. This option, which is exercisable for up to 30 days after the date of this prospectus, permits the underwriters to purchase a maximum of 450,000 additional shares from us to cover over-allotments. If the underwriters exercise all or part of this option, they will purchase shares covered by the option at the public offering price that appears on the cover page of this prospectus, less the underwriting discount. If this option is exercised in full, the total price to the public will be \$ , and the total proceeds to us will be \$ . The underwriters have severally agreed that, to the extent the over-allotment option is exercised, they will each purchase a number of additional shares proportionate to the underwriter's initial amount reflected in the foregoing table.

The following table provides information regarding the amount of the discount to be paid to the underwriters by us:

TOTAL

WITHOUT EXERCISE OF WITH FULL EXERCISE OF PER SHARE

OVER-ALLOTMENT OVER-ALLOTMENT

We estimate that the total expenses of the offering, excluding the underwriting discount, will be approximately \$500,000.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act of 1933.

We, as well as our executive officers and Directors, have agreed to a 90-day "lock up" with respect to approximately 174,069 shares of common stock, and certain other of our securities that they beneficially own, including securities that are convertible into shares of common stock and securities that are exchangeable or exercisable for shares of common stock. This means that, subject to certain exceptions, for a period of 90 days following the date of this prospectus, we and such persons may not offer, sell, pledge or otherwise dispose of these securities without the prior written consent of CIBC World Markets Corp.

Rules of the Securities and Exchange Commission may limit the ability of the underwriters to bid for or purchase shares before the distribution of the shares is completed. However, the underwriters may engage in the following activities in accordance with the rules:

- Stabilizing transactions -- The representatives may make bids or purchases for the purpose of pegging, fixing or maintaining the price of the shares, so long as stabilizing bids do not exceed a specified maximum.
- Over-allotments and syndicate covering transactions -- The underwriters may create a short position in the shares by selling more shares than are set forth on the cover page of this prospectus. If a short position is created in connection with the offering, the representatives may engage in syndicate covering transactions by purchasing shares in the open market. The representatives may also elect to reduce any short position by exercising all or part of the over-allotment option.
- Penalty bids -- If the representatives purchase shares in the open market in a stabilizing transaction or syndicate covering transaction, they may reclaim a selling concession from the underwriters and selling group members who sold those shares as part of this offering.
- Passive market making -- Market makers in the shares who are underwriters or prospective underwriters may make bids for or purchases of shares, subject to certain limitations, until the time, if ever, at which a stabilizing bid is made.

Stabilization and syndicate covering transactions may cause the price of the shares to be higher than it would be in the absence of such transactions. The imposition of a penalty bid might also have an effect on the price of the shares if it discourages resales of the shares.

Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of the shares. These transactions may occur on the Nasdaq National Market or otherwise. If such transactions are commenced, they may be discontinued without notice at any time.

#### LEGAL MATTERS

Brown, Rudnick, Freed & Gesmer, P.C., One Financial Center, Boston, Massachusetts 02111, will pass upon certain legal matters in connection with this offering for us. Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109, will pass upon certain legal matters in connection with this offering for the underwriters.

#### EXPERTS

We include in this prospectus our consolidated balance sheets as of March 29, 1998 and March 28, 1999, and our consolidated statements of operations, cash flows and stockholders' equity for each of the years in the three-year period ended March 28, 1999 in reliance on the report of KPMG Peat Marwick LLP, independent certified public accountants, given on the authority of that firm as experts in accounting and auditing.

### WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any document we file at the SEC's public reference room at 450 Fifth Street, NW, Washington, D.C., 20549, and at the SEC's public reference rooms in Chicago, Illinois and New York, New York. Please call the SEC at 1-800-SEC-0330 for further information on the public reference rooms. Our SEC filings are also available to the public on the SEC's Website at "http://www.sec.gov."

We have filed with the SEC a registration statement on Form S-3 under the Securities Act of 1933, as amended, with respect to the common stock offered in connection with this prospectus. This prospectus does not contain all of the information set forth in the registration statement. We have omitted certain parts of the registration statement in accordance with the rules and regulations of the SEC. For further information with respect to us and the common stock, you should refer to the registration statement. Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete and, in each instance, you should refer to the copy of such contract or document filed as an exhibit to or incorporated by reference in the registration statement. Each statement as to the contents of such contract or document is qualified in all respects by such reference. You may obtain copies of the registration statement from the SEC's principal office in Washington, D.C. upon payment of the fees prescribed by the SEC, or you may examine the registration statement without charge at the offices of the SEC described above.

The SEC allows us to "incorporate by reference" the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings we will make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934.

- Annual Report on Form 10-K for the fiscal year ended March 29, 1998;
- Quarterly Reports on Form 10-Q for the fiscal quarters ended June 28, 1998, September 27, 1998 and December 27, 1998;
- 3. Proxy statement used for our annual meeting of stockholders held on September 14, 1998; and
- 4. The description of our common stock contained in the registration statement on Form 8-A filed on May 29, 1998, including all amendments or reports filed for the purpose of updating such description.

You may request a copy of these filings at no cost, by writing or telephoning our general counsel at the following address:

Alpha Industries, Inc. 20 Sylvan Road Woburn, Massachusetts 01801 (781) 935-5150

You should rely only on the information or representations provided in this prospectus. We have authorized no one to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front of the document.

# ALPHA INDUSTRIES, INC. INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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#### INDEPENDENT AUDITORS' REPORT

The Board of Directors and Stockholders Alpha Industries, Inc.:

We have audited the consolidated balance sheets of Alpha Industries, Inc. and subsidiaries as of March 29, 1998 and March 28, 1999 and the related consolidated statements of operations, cash flows and stockholders' equity for each of the years in the three-year period ended March 28, 1999. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. 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, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Alpha Industries, Inc. and subsidiaries at March 29, 1998 and March 28, 1999, and the results of their operations and their cash flows for each of the years in the three-year period ended March 28, 1999 in conformity with generally accepted accounting principles.

/s/ KPMG PEAT MARWICK LLP Boston, Massachusetts April 30, 1999

# ALPHA INDUSTRIES, INC. CONSOLIDATED BALANCE SHEETS (IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)

	MARCH 29, 1998	MARCH 28, 1999
ASSETS (NOTE 3)		
Current assets	614 256	¢ 14 000
Cash and cash equivalentsShort-term investmentsAccounts receivable, trade, less allowance for doubtful	\$14,356 1,493	\$ 14,029 9,731
accounts of \$634 and \$741	18,500	22,972
Inventories (Note 2)	7,941	8,773
Prepayments and other current assets  Deferred tax assets	883 	796 6,522
Total current assets	43,173	62,823
Land	437	437
Building and improvements	23,000	26,488
Machinery and equipment	70,051	77 <b>,</b> 776
	93,488	104,701
Less-accumulated depreciation and amortization	60,824	62,204
	32,664	42,497
Other assets	1,092	1,361
Total assets	\$76 <b>,</b> 929	\$106,681 ======
LIABILITIES AND STOCKHOLDERS' EQUITY Current liabilities		
Current maturities of long-term debt (Note 3)	\$ 1,876	\$ 912
Current maturities of capital lease obligations Accounts payable	8 5 <b>,</b> 725	10,700
Accrued liabilities	3, 723	10,700
Payroll, commissions and related expenses	6,724	7,292
Other	2,779 	1,232
Total current liabilities	17,112	20,136
Long-term debt (Note 3)	1,625	713
Other long-term liabilities	2,370	1,626
Deferred tax liabilities		3,192
Common stock par value \$0.25 per share; authorized		
30,000,000 shares; issued 15,817,751 and 16,051,311	3,954	4,013
Additional paid-in capital	55,440	58,872
Retained earnings (accumulated deficit)	(3,214)	18,276
	56,180	81,161
Less Treasury shares 150,293 and 62,379 at cost	315	133
Unearned compensation-restricted stock	43	14
Total stockholders' equity	55 <b>,</b> 822	81,014
Total liabilities and stockholders' equity	\$76 <b>,</b> 929	\$106,681

The accompanying notes are an integral part of these financial statements.

# ALPHA INDUSTRIES, INC. CONSOLIDATED STATEMENTS OF OPERATIONS (IN THOUSANDS, EXCEPT PER SHARE DATA)

YEARS ENDED

	MARCH 30,	MARCH 29, 1998	MARCH 28, 1999
Sales Cost of sales Research and development expenses. Selling and administrative expenses. Repositioning expenses (Note 4).	\$ 85,253 68,519 9,545 20,441 2,074	\$116,881 72,799 10,035 22,359	\$126,339 71,131 12,886 22,767
Total operating expenses		105,193	106,784
Operating income (loss)	(15,326)	11,688	19,555
Interest expense Interest income Other expense, net	(554) 415 (107)	(471) 396 (166)	(267) 993 (56)
Total other income (expense)	(246)	(241)	670
<pre>Income (loss) before income taxes</pre>	(15,572)	11,447 1,145	20,225 (1,265)
Net income (loss)		\$ 10,302 ======	\$ 21,490
Net income (loss) per share: Basic		\$ 0.67	\$ 1.36
Diluted	\$ (1.05)	====== \$ 0.66 ======	\$ 1.31
Shares used in per share calculation: Basic		15,302	15,824
Diluted	14,772	15,711 ======	16,351 ======

The accompanying notes are an integral part of these financial statements. \$F-4\$

# ALPHA INDUSTRIES, INC. CONSOLIDATED STATEMENTS OF CASH FLOWS (IN THOUSANDS)

YEARS ENDED \_\_\_\_\_ MARCH 30, MARCH 29, MARCH 28, 1997 1998 1999 CASH PROVIDED BY (USED IN) OPERATIONS: Net income (loss)......\$(15,572) \$ 10,302 \$ 21,490 Adjustments to reconcile net income (loss) to net cash provided by (used in) operations: Depreciation and amortization of property, plant, and equipment..... 5,886 6,742 7,851 Deferred taxes..... (2,627)Amortization of unearned compensation -- restricted 35 31 stock.... 90 Unearned compensation..... (11) Loss on sales and retirements of property, plant, and 132 12 equipment..... Noncash portion of repositioning charges..... Decrease (increase) in other assets..... (262) 375 (285) Increase (decrease) in other liabilities and long-term benefits.... 630 884 (744)Issuance of treasury stock to 401(k) plan..... 8.31 833 960 Change in assets and liabilities: 771 (1,481)(4.472)Accounts receivable..... 2,326 (832) 770 Inventories..... (26) 105 Prepayments and other current assets..... 318 87 (1,455)4,975 Accounts payable..... Accrued liabilities..... 2,631 (979) 818 1,106 (1,106)Repositioning reserve..... 21,748 (5.475)25.526 Net cash provided by (used in) operations..... CASH USED IN INVESTING: Additions to property, plant and equipment excluding (11,039) (7.951)(17.730)capital leases..... (4,030)(2,335) Purchases of short-term investments..... (17.943)9,705 Maturities of short-term investments..... 6,955 2,060 Net proceeds from divestitures..... 1,191 Proceeds from sale of property, plant and equipment...... 109 34 Net cash used in investing..... (3,835)(11,205)(25,934)-----\_\_\_\_\_ CASH PROVIDED BY (USED IN) FINANCING: Proceeds from notes payable..... 4,952 Payments on notes payable..... (1,304)(3,044)(1,876)(437) (230) (8) 16 Payments on capital lease obligations..... Deferred charges related to long-term debt..... 1.8 2 Exercise of stock options and warrants..... 462 1,400 1,724 225 Proceeds from sale of stock..... 108 138 Repurchase of treasury shares..... --(268)--\_\_\_\_\_ -----\_\_\_\_\_ Net cash provided by (used in) financing..... 3,799 (2,002)81 Net (decrease) increase in cash and cash equivalents...... (5,511)8,541 (327) Cash and cash equivalents, beginning of year..... 5,815 14,356 11,326

The accompanying notes are an integral part of these financial statements.

Cash and cash equivalents, end of year..... \$ 5,815

\$ 14,356

\$ 14,029

# ALPHA INDUSTRIES, INC. CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (IN THOUSANDS)

	COMMON STOCK		COMMON STOCK		ADDITIONAL PAID-IN	RETAINED EARNINGS (ACCUMULATED	TREASURY	UNEARNED COMPENSATION RESTRICTED
	SHARES	PAR VALUE	CAPITAL	DEFICIT)	STOCK	STOCK		
Balance at March 31, 1996 Net loss	14,908	\$3 <b>,</b> 727	\$52 <b>,</b> 225	\$ 2,056 (15,572)	\$(321)	\$(154)		
Employee Stock Purchase Plan Amortization of unearned	23	5	103	(13,372)				
compensation restricted stock Issuance of 150,870 treasury						35		
shares to 401(k) plan Repurchase of 19,000 shares of			702		129			
restricted stock			(53)		(3)	45		
Exercise of stock options	259	65	397					
Balance at March 30, 1997	15,190	3,797	53,374	(13,516)	(195)	(74)		
Net income				10,302				
Employee Stock Purchase Plan Amortization of unearned	30	7	131					
compensation restricted stock Issuance of 124,170 treasury						31		
shares to 401(k) plan			685		148			
Repurchase of 32,754 shares					(268)			
Exercise of stock options	523	131	1,081					
Exercise of stock warrants	75 	19	169					
Balance at March 29, 1998 Net income	15,818	3,954 	55 <b>,</b> 440	(3,214) 21,490	(315)	(43)		
Employee Stock Purchase Plan	25	7	218					
Issuance of restricted stock Amortization of unearned	6	1	60			(61)		
compensation restricted stock Issuance of 87,914 treasury shares						90		
to 401(k) plan			778		182			
Exercise of stock options  Tax benefit from the exercise of	202	51	1,673					
stock options			703					
Balance at March 28, 1999		\$4,013	\$58,872	\$ 18,276	\$(133)	\$ (14)		
	=====	======	======	======	=====	=====		

The accompanying notes are an integral part of these financial statements.

# ALPHA INDUSTRIES, INC. NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### NOTE 1 -- SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation

The financial statements include the accounts of the Company and its subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation. The Company's fiscal year ends on the Sunday closest to March 31. There were 52 weeks in fiscal 1997, 1998 and 1999.

Use of Estimates

The preparation of consolidated financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses. Actual results could differ from those estimates.

Revenue Recognition

Revenue is recognized when a product is shipped and services are performed.

Foreign Currency Translation

The accounts of foreign subsidiaries are translated in accordance with Statement of Financial Accounting Standards ("SFAS") No. 52. Foreign operations are remeasured as if the functional currency were the U.S. dollar. Monetary assets and liabilities are translated at the year end rates of exchange. Revenues and expenses (except cost of sales and depreciation) are translated at the average rate for the period. Non-monetary assets, equity, cost of sales and depreciation are remeasured at historical rates. Remeasurement gains and losses are reflected currently in operations and are not material.

Research and Development Expenditures

Research and development expenditures are charged to income as incurred.

Cash, Cash Equivalents and Short-term Investments

Cash and cash equivalents include cash deposited in demand deposits at banks and highly liquid investments with original maturities of  $90\ days$  or less.

The Company's short-term investments are classified as held-to-maturity. These investments consist primarily of commercial paper and securities issued by various federal agencies with original maturities of more than 90 days. Such short-term investments are carried at amortized cost, which approximates fair value, due to the short period of time to maturity. Gains and losses are included in investment income in the period they are realized.

Inventories

Inventories are stated at the lower of cost, determined on a first-in, first-out basis, or market.

Property, Plant and Equipment

Property, plant and equipment are carried at cost. Depreciation is provided on the straight-line method for financial reporting and accelerated methods for tax purposes.

Estimated useful lives used for depreciation purposes are 5 to 30 years for buildings and improvements and 3 to 10 years for machinery and equipment.

During fiscal 1999, the Company removed \$6.5 million of fully depreciated fixed assets from the related property, plant and equipment and accumulated depreciation accounts.

#### Fair Value of Financial Instruments

Financial instruments of the Company consist of cash, cash equivalents, accounts receivable, accounts payable and accrued liabilities. The carrying value of these financial instruments approximates their fair value because of the short maturity of these instruments. Based upon borrowing rates currently available to the Company for issuance of similar debt with similar terms and remaining maturities, the estimated fair value of long-term debt approximates their carrying amounts. The Company does not use derivative instruments.

#### Income Taxes

The Company uses the asset and liability method of accounting for income taxes. Under the asset and liability method, deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. This method also requires the recognition of future tax benefits such as net operating loss carryforwards, to the extent that realization of such benefits is more likely than not. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

#### Net Income per Common Share

Basic earnings per share is calculated by dividing net income by the weighted average number of common shares outstanding. Diluted earnings per share includes the dilutive effect of stock options and warrants, if their effect is dilutive, using the treasury stock method.

A reconciliation of the weighted average number of shares outstanding used in the computation of the basic and diluted earnings per share for each of the following years:

	YEARS ENDED		
	MARCH 30, 1997	MARCH 28, 1999	
		(IN THOUSANDS)	
Weighted average shares (basic)	14,772 	15,302 409	15,824 527
Weighted average shares (diluted)	14,772 =====	15,711 =====	16,351 =====

Impairment of Long-Lived Assets and Long-Lived Assets to be Disposed of

The Company adopted the provisions of SFAS No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed of," during fiscal 1997. This statement requires that long-lived assets and certain identifiable intangibles be reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to undiscounted future net cash flows expected to be generated by the asset. If such assets are

considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell. Adoption of this Statement did not have a material impact on the Company's financial position, results of operations, or liquidity.

#### Stock Option Plans

Prior to fiscal 1997, the Company accounted for its stock option plan in accordance with the provisions of Accounting Principles Board ("APB") Opinion No. 25, "Accounting for Stock Issued to Employees," and related interpretations. As such, compensation expense would be recorded on the date of grant only if the current market price of the underlying stock exceeded the exercise price. During fiscal 1997, the Company adopted SFAS No. 123, "Accounting for Stock-Based Compensation," which permits entities to recognize as expense over the vesting period the fair value of all stock-based awards on the date of grant. Alternatively, SFAS No. 123 also allows entities to continue to apply the provisions of APB Opinion No. 25 and provide pro forma net income and pro forma earnings per share disclosures for employee stock option grants made in 1995 and future years as if the fair-value-based method defined in SFAS No. 123 had been applied. The Company has elected to continue to apply the provisions of APB Opinion No. 25 and provide the pro forma disclosure provisions of SFAS No. 123.

### Comprehensive Income (Loss)

During fiscal 1999, the Company adopted the provisions of SFAS No. 130, "Reporting Comprehensive Income." SFAS No. 130 is a financial statement presentation standard which requires the Company to disclose non-owner changes included in equity but not included in net income or loss. There were no differences between net income (loss) and comprehensive income (loss) for fiscal 1997, 1998 and 1999.

#### Recent Accounting Pronouncements

SFAS No. 133, "Accounting for Derivative Instruments and Hedging Instruments" establishes accounting and reporting standards for derivatives and hedging activities. It requires that an entity recognize all derivatives as either assets or liabilities in the balance sheet and measure those instruments at fair value. SFAS No. 133 will be effective for the Company's fiscal year 2001. The Company does not expect this new statement to have a material effect on its consolidated financial position, results of operations or cash flow.

#### NOTE 2 -- INVENTORIES

Inventories consisted of the following:

	MARCH 29, 1998	MARCH 28, 1999
	(IN TH	OUSANDS)
Raw materials		\$3,852 3,034 1,887
	\$7,941 =====	\$8,773

### NOTE 3 -- BORROWING ARRANGEMENTS AND COMMITMENTS

### Lines Of Credit

The Company has a \$7.5 million Working Capital Revolving Line of Credit Agreement which expires September 30, 1999. This line of credit is collateralized by the assets of the Company, excluding real

property, not otherwise collateralized. A commitment fee of 1/2% per year is due quarterly under the Agreement. There were no borrowings under this Credit Agreement at March 29, 1998 and March 28, 1999.

The Company also has a \$7.5 million Equipment Line of Credit Agreement which expires on September 30, 1999. Prior to expiration, the Equipment Line of Credit Agreement may be converted, at the option of the Company, to a four-year term loan. This equipment line of credit is collateralized by equipment financed. A facility fee of \$15,000 is payable on October 1, 1999 only if the Company does not borrow at least half of the loan amount prior to expiration. There were no borrowings under this Agreement at March 29, 1998 and March 28, 1999.

Long-Term Debt

Long-term debt consisted of the following:

	•	MARCH 28, 1999	
	(IN THO	USANDS)	
Equipment Term Note. Industrial Revenue Bond. CDBG Grant.	\$2,344 444 713	\$ 689 334 602	
Less current maturities	3,501 1,876	1,625 912	
	\$1,625 =====	\$ 713 ======	

The Equipment Term Note is at LIBOR (5.672% at March 29, 1998 and 4.963% at March 28, 1999) plus 2.5% and 1.5%, respectively. This note is collateralized by the assets of the Company, excluding real property, not otherwise collateralized. Principal payments of approximately \$138,000 plus interest are due monthly until August 1999.

The Industrial Revenue Bond is held by the Farmers and Mechanics National Bank. The interest rate on this bond is prime  $(8.5\% \text{ and } 7.75\% \text{ at March } 29,\ 1998 \text{ and March } 28,\ 1999)$  and quarterly principal payments of approximately \$28,000 are due until March 2002. The bond is secured by various property, plant and equipment with a net book value of \$2.1 million at March 28, 1999.

The Company obtained a ten year \$960,000 loan from the State of Maryland under the Community Development Block Grant program. Quarterly payments are due through December 2003 and represent principal plus interest at 5% of the unamortized balance.

Aggregate annual maturities of long-term debt are as follows:

FISCAL YEAR	(IN THOUSANDS)
2001 2002.	
2003	
2004	104
	\$713
	====

Cash payments for interest were \$470,000, \$492,000 and \$253,000, in fiscal 1997, 1998 and 1999, respectively.

The bond, lines of credit and term loan agreements include various covenants that require maintenance of certain financial ratios and balances and restrict creation of funded debt and payment of dividends.

#### NOTE 4 -- REPOSITIONING CHARGE

During fiscal 1997, the Company successfully completed the resizing of Trans-Tech, Inc. ("TTI"), its Maryland subsidiary, which included the sale of Trans-Tech Europe, its French ceramic manufacturing operation, and the closing of the TTI California facility. The Company also completed the sale of the digital radio product line. The above actions resulted in a repositioning charge which was recorded in the fourth quarter of fiscal 1997. The charge included the following items:

	(IN	THOUSANDS)
Employee severance at TTI		\$ 493
Lease commitments on unoccupied facilities at TTI		512
Write-off of excess equipment at TTI		263
Net loss on divestitures		806
Total repositioning charge		\$2,074
Total repositioning charge		72,014
		======

The severance charges were related to a reduction in force of 47 employees, largely among support personnel, and were completed in the fourth quarter of fiscal 1997.

The cash payments relating to the repositioning charge totaled approximately \$1.4 million. Cash payments totaling \$308,000 and \$1.1 million were made during fiscal 1997 and 1998, respectively.

During fiscal 1997, the Company also recorded in cost of sales a \$2.6 million write-down of inventory resulting from shifts in demand away from ceramic products.

#### NOTE 5 -- INCOME TAXES

Income (loss) before income taxes consisted of:

	YEARS ENDED			
	MARCH 30, MARCH 29, 1997 1998		MARCH 28, 1999	
		(IN THOUSANDS)		
Domestic	\$(13,520) (2,052)	\$11,027 420	\$19,443 782	
Total	\$(15,572) ======	\$11,447 ======	\$20,225 ======	

The income tax provision (benefit) consisted of the following:

FISCAL 1999	CURRENT	DEFERRED	TOTAL
	(	IN THOUSANDS	)
Federal. State. Foreign. Total.	\$ 447 670 245  \$1,362	\$ (2,530) (97)  \$ (2,627)	573 245
FISCAL 1998	CURRENT	DEFERRED	TOTAL
Federal. State. Foreign.	\$ 221 683 241	\$  	\$ 221 683 241
Total	\$1,145 =====	\$ ======	\$ 1,145 ======

FISCAL 1997	CURRENT	DEFERRED	TOTAL
FederalStateForeign.	(119)	\$  	\$ (119) 119
Total	\$ ======	\$ ======	\$ ======

Income tax expense (benefit) for income taxes is different from that which would be obtained by applying the statutory federal income tax rates of 34% to pretax income in 1997 and 1998 and 35% in 1999, as a result of the following:

	YEARS ENDED		
		MARCH 29, 1998	
		(IN THOUSANDS)	
Tax expense (benefit) at U.S. statutory rate Alternative minimum tax	\$(5,294) 	\$ 3,892 221	\$ 7,079
Foreign tax rate difference			(29)
State income taxes, net of federal benefit	79	451	372
Change in valuation allowance	5,189	(3,375)	(9,298)
Other, net	26	(44)	611
Total	\$	\$ 1,145	\$(1,265)
	======	======	======

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities are as follows:

	1998	MARCH 28, 1999
		OUSANDS)
Deferred tax assets:		
Accounts receivable due to bad debts	\$ 235	\$ 242
capitalization	1,238	1,377
Accrued liabilities	2,494	892
Deferred compensation	140	670
Other	24	
Net operating loss carryforward	8,723	3,687
Charitable contribution carryforward	30	
Minimum tax credit and state tax credit carryforwards	1,045	1,007
Total gross deferred tax assets		
Less valuation allowance	(10,128)	(830)
Net deferred tax assets	3,801	
Deferred tax liabilities:		
Property, plant and equipment due to depreciation	(3,801)	(3,715)
Total gross deferred tax liability	(3,801)	(3,715)
Net deferred tax assets	\$ =======	

Deferred income taxes are presented in the accompanying consolidated balance sheets as follows:

	СН 29 <b>,</b> 998	MARCH 28, 1999
	 (IN THO	USANDS)
Current deferred tax assets  Non-current deferred tax liabilities	\$  	\$ 6,522 3,192
Net deferred tax assets	\$   =====	\$ 3,330 ======

The valuation allowance for deferred tax assets as of March 29, 1998 and March 28, 1999 was \$10.1 million and \$830,000, respectively. The net change in the total valuation allowance for the years ended March 29, 1998 and March 28, 1999 was a decrease of \$3.4 million and \$9.3 million, respectively. During fiscal 1999, the Company reduced the valuation allowance to reflect the deferred tax assets utilized in fiscal 1999 to reduce the current income taxes and to recognize additional net deferred tax asset. Management believes that the Company will generate sufficient future taxable income to realize substantially all of the deferred tax asset prior to expiration of any net operating loss carryforwards. As of March 28, 1999, the Company has available for income tax purposes approximately \$10.5 million in federal net operating loss carryforwards which are available to offset future taxable income. These loss carryforwards, if not utilized, begin to expire in fiscal 2004. Should the Company undergo an ownership change as defined in Section 382 of the Internal Revenue Code, the Company's tax net operating loss

carryforwards generated prior to the ownership change will be subject to an annual limitation which could reduce or defer the utilization of these losses. The Company also has minimum tax credit carryforwards of approximately \$546,000 which are available to reduce future federal regular income taxes, if any, over an indefinite period. In addition, the Company has state tax credit carryforwards of \$461,000 which are available to reduce state income taxes over an indefinite period.

Cash payments for income taxes were \$149,000, \$342,000 and \$915,000 in fiscal 1997, 1998 and 1999, respectively.

The Company has not recognized a deferred tax liability of approximately \$502,000 for the undistributed earnings of its 100% owned foreign subsidiaries that arose in 1999 and prior years because the Company currently does not expect those unremitted earnings to reverse and become taxable to the Company in the foreseeable future. A deferred tax liability will be recognized when the Company expects that it will recover those undistributed earnings in a taxable manner, such as through receipt of dividends or sale of the investments. As of March 28, 1999, the undistributed earnings of these subsidiaries were approximately \$1.4 million.

#### NOTE 6 -- COMMON STOCK

### Common Stock Split

On January 28, 1999, the Board of Directors declared a three-for-two split of the Company's common stock effected in the form of a stock dividend paid on February 19, 1999 to shareholders of record as of February 8, 1999. All agreements concerning stock options and other commitments payable in shares of the Company's common stock provide for the issuance of additional shares due to the declaration of the stock split. An amount equal to the par value of the common shares issued plus cash paid in lieu of fractional shares was transferred from additional paid-in capital to the common stock account. All share and per share data in these consolidated financial statements and related footnotes has been restated to reflect the stock split on a retroactive basis for all periods presented.

#### Long-Term Incentive Plans

The Company has long-term incentive plans adopted in 1986 and 1996 pursuant to which stock options, with or without stock appreciation rights, may be granted and restricted stock awards and book value awards may be made.

#### Common Stock Options

These options may be granted in the form of incentive stock options or non-qualified stock options. The option price may vary at the discretion of the Compensation Committee but shall not be less than the greater of fair market value or par value. The option term may not exceed ten years. The options may be exercised in cumulative annual increments commencing one year after the date of grant. A total of 4,200,000 shares are authorized for grant under the Company's long-term incentive plans. The number of common shares reserved for granting of future awards was 492,750, 113,325 and 840,409, at March 30, 1997, March 29, 1998 and March 28, 1999, respectively.

### Restricted Stock Awards

For fiscal 1999, a total of 6,066 restricted shares of the Company's common stock were granted to certain employees. The market value of these shares was \$61,000 and the vesting period was one year. This amount was recorded as unearned compensation -- restricted stock and is shown as a separate component of stockholders' equity. Unearned compensation is being amortized to expense over the vesting period and such expense amounted to \$35,000, \$31,000 and \$90,000 in fiscal 1997, 1998 and

1999, respectively. No restricted shares of the Company's common stock were issued during fiscal 1997 or 1998.

Long-Term Compensation Plan

On October 1, 1990, the Company adopted a Supplemental Executive Retirement Plan ("SERP") for certain key executives. Benefits payable under this plan are based upon the participant's base pay at retirement reduced by proceeds from the exercise of certain stock options. Options vest over a five-year period. Benefits earned under the SERP are fully vested at age 55; however, the benefit is ratably reduced if the participant retires prior to age 65. Compensation expense related to the plan was \$106,000, \$127,000 and \$27,000 in fiscal 1997, 1998 and 1999, respectively. Total benefits accrued under these plans were \$308,000 at March 29, 1998 and \$335,000 at March 28, 1999.

A summary of stock option and restricted stock award transactions follows:

	SHARES	WEIGHTED AVERAGE EXERCISE PRICE OF SHARES UNDER PLAN
Balance outstanding at March 31, 1996		\$2.92
Granted. Exercised. Restricted. Cancelled.	897,750 (259,125) (34,746) (279,755)	
Balance outstanding at March 30, 1997	1,583,205	4.14
Granted. Exercised. Restricted. Cancelled.	390,000 (518,991)	7.58 2.30  6.11
Balance outstanding at March 29, 1998		5.65
Granted Exercised Restricted. Cancelled.	(16,004)	8.06 5.06  6.52
Balance outstanding at March 28, 1999	1,643,023	\$6.46

The fair value of each option grant was estimated on the grant date using the Black Scholes Option Pricing Model with the following weighted average assumptions:

	1997	1998	1999
Expected volatility	85%	71%	85%
Risk free interest rate	7%	6%	5%
Dividend yield			
Expected option life (years)	9.95	4.4	4.0

Options exercisable at the end of each fiscal year:

		WEIGHTED AVERAGE
	SHARES	EXERCISE PRICE
1997	634,404	\$2.17
1998		\$3.95
1999	413,960	\$4.80
eighted average fair value of options granted during the year:		

The following table summarizes information concerning currently outstanding and exercisable options as of March 28, 1999:

1998.....

1999.....

RANGE OF EXERCISE PRICES	NUMBER OUTSTANDING	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE (YEARS)	WEIGHTED AVERAGE OUTSTANDING OPTION PRICE	OPTIONS EXERCISABLE	WEIGHTED AVERAGE EXERCISE PRICE
\$ 1.58 - \$ 5.00	482,523	6.63	\$ 3.97	224,023	\$ 3.11
\$ 5.01 - \$10.00	1,027,834	8.29	\$ 7.13	177,637	\$ 6.52
\$10.01 - \$15.00	113,100	8.94	\$11.48	12,300	\$10.68
\$15.01 - \$20.00	2,000	9.93	\$17.38	_	=
\$20.01 - \$23.00	1,500	9.78	\$23.00	_	=
Restricted	16,066	6.86	-	_	=
	1,643,023			413,960	
	=======			======	

\$5.57

\$7.58

\$8.06

The Company applies APB Opinion No. 25, "Accounting for Stock Issued to Employees" and related interpretations in accounting for its stock option and employee stock purchase plans, accordingly, no compensation expense has been recognized in the consolidated financial statements for such plans. Had compensation cost for the Company's stock option plans been determined based upon the fair value at the grant date for awards under these plans consistent with the methodology prescribed under SFAS No. 123, "Accounting for Stock-based Compensation," the Company's net income (loss) would have been as follows:

		YEARS ENDED		
		MARCH 30, 1997	MARCH 29, 1998	MARCH 28, 1999
		(	IN THOUSANDS)	
Net income (loss)	As reported	\$(15,572)	\$10,302	\$21,490
	Pro forma	\$(15,921)	\$ 9,650	\$20,433
Net income (loss) per share	As reported	\$ (1.05)	\$ 0.66	\$ 1.31
	Pro forma	\$ (1.08) ======	\$ 0.61 =====	\$ 1.25 ======

The effect of applying SFAS No. 123 as shown in the above pro forma disclosure is not representative of the pro forma effect on net income in future years because it does not take into consideration pro forma compensation expense related to grants made prior to fiscal year 1996.

#### Stock Purchase Warrants

In April 1994, the Company amended its line of credit agreement and issued 75,000 stock purchase warrants to Silicon Valley Bank. The warrants were exercisable at \$2.50 per share and were scheduled to expire on April 1, 1999. During fiscal 1998, Silicon Valley Bank exercised the 75,000 stock purchase warrants.

#### Stock Option Plan For Non-Employee Directors

The Company has two stock option plans for non-employee directors — the 1994 Non-Qualified Stock Option Plan and the 1997 Non-Qualified Stock Option Plan. Under the two plans, a total of 225,000 shares have been authorized for option grants. The two plans have substantially similar terms and conditions and are structured to provide options to non-employee directors as follows: a new Director receives a total of 22,500 options upon becoming a member of the Board; and continuing Directors receive 7,500 options after each Annual Meeting of Shareholders. Under both of these plans the option price is the fair market value at the time the option is granted. Options become exercisable 20% per year beginning one year from the date of grant. During fiscal 1998 and 1999, 112,500 and 30,000 shares were granted at prices of \$10.33 or \$13.17, respectively. No options were granted during fiscal 1997. At March 28, 1999 a total of 172,500 options have been granted under these two plans. During fiscal 1999, 22,500 options were exercised at a weighted average exercise price of \$6.48. At March 28, 1999, 12,000 shares were exercisable.

#### Stock Purchase Plan

The Company maintains an employee stock purchase plan. Under the plan, eligible employees may purchase common stock through payroll deductions of up to 10% of compensation. The price per share is the lower of 85% of the market price at the beginning or end of each six-month offering period. The plan provides for purchases by employees of up to an aggregate of 450,000 shares through December 31, 2001. Shares of 22,614, 29,640 and 25,753 were purchased under this plan in fiscal 1997, 1998 and 1999, respectively.

### NOTE 7 -- EMPLOYMENT BENEFIT PLAN

The Company maintains a 401(k) plan covering substantially all of its employees. All of the Company's employees who are at least 21 years old and have completed six months of service (1,000 hours in a 12 month period) with the Company are eligible to receive a Company contribution. Discretionary Company contributions are determined by the Board of Directors and may be in the form of cash or the Company's stock. The Company contributes a match of 100% of the first 1% and a 50% match on the next 4% of an employee's salary for employees with 5 years or less of service. For employees with more than 5 years of service the Company contributes a 100% match on the first 1% and a 75% match on the next 5% of an employee's salary. For fiscal 1997, 1998 and 1999, the Company contributed 166,434, 92,621 and 80,668, shares, respectively of the Company's common stock valued at \$835,000, \$833,000 and \$960,000 to the 401(k) plan.

### NOTE 8 -- COMMITMENTS AND CONTINGENCIES

The Company has various operating leases primarily for computer equipment and buildings. Rent expense amounted to \$1.9 million, \$1.8 million and \$1.3 million in fiscal 1997, 1998 and 1999, respectively.

Purchase options may be exercised at various times for some of these leases. Future minimum payments under these leases are as follows:

	FISCAL YEAR	(IN THOUSANDS)
Thereafter		
		\$1 <b>,</b> 916
		=====

The Company has been notified by federal and state environmental agencies of its potential liability with respect to the Spectron, Inc. Superfund site in Elkton, Maryland. Several hundred other companies have also been notified about their potential liability regarding this site. The Company continues to deny that it has any responsibility with respect to this site other than as a de minimis party. Management is of the opinion that the outcome of the aforementioned environmental matter will not have a material effect on the Company's operations or financial position.

The Company is party to suits and claims arising in the normal course of business. Management believes these are adequately provided for or will result in no significant additional liability to the Company.

#### NOTE 9 -- RELATED PARTY TRANSACTIONS

The Company has had transactions in the normal course of business with various related parties. Scientific Components Corporation, currently an owner of the Company's common stock, purchased approximately \$5.1 million, \$8.9 million and \$7.4 million of products during fiscal 1997, 1998 and 1999, respectively. In addition, a Director of the Company is also a former Director of Scientific Atlanta, Inc. During fiscal 1997, 1998 and 1999, Scientific Atlanta, Inc. purchased approximately \$1.0 million, \$471,000 and \$673,000 of product, respectively.

### NOTE 10 -- SEGMENT INFORMATION

The Company is engaged in the design and manufacture of discrete semiconductors, integrated circuits and electrical ceramic components for a wide range of applications in the wireless communications industry.

The Company has adopted SFAS No. 131, "Disclosures About Segments of an Enterprise and Related Information." SFAS No. 131 establishes standards for the way public business enterprises report information about operating segments in annual financial statements and in interim reports to shareholders. The method for determining what information to report is based on the way that management organizes the segments within the Company for making operating decisions and assessing financial performance. In evaluating financial performance, management uses sales and operating profit as the measure of the segments profit or loss.

The Company is organized into three reportable segments as follows:

### Wireless Semiconductor Products Group

The Wireless Semiconductor segment designs and manufactures gallium arsenide integrated circuits and other discrete semiconductors to the global market for wireless telephone handsets, wireless data and other applications.

Application Specific Products Group

The Application Specific segment designs and manufactures a broad range of gallium arsenide and silicon devices and components to satellite, instrumentation, defense and other communications markets.

### Ceramic Products Group

The Ceramics segment designs and manufactures technical ceramic and magnetic products for wireless telephony infrastructure and other wireless markets.

The table below presents selected financial data by business segment for fiscal 1998 and 1999. It is not practicable to present information for fiscal 1997 as the Company was not segmented in this manner at that time. The accounting policies of the segments are the same as those described in the "Summary of Significant Accounting Policies."

	YEARS ENDED	
SALES	MARCH 29, 1998	MARCH 28, 1999
	(IN TH	OUSANDS)
Wireless Semiconductor Products	\$ 52,612 37,118 27,151	\$ 65,822 34,977 25,540
	\$116,881 ======	\$126,339 ======
Operating Income		
Wireless Semiconductor Products	\$ 2,799 7,210 1,679	\$ 7,435 10,241 1,879
	\$ 11,688 ======	\$ 19,555 ======
	MARCH 29, 1998	MARCH 28, 1999
Net Long-Lived Assets	(IN TH	OUSANDS)
Wireless Semiconductor Products	\$ 18,712 3,357 10,497 98	\$ 27,646 3,657 11,128 66
	\$ 32,664 ======	\$ 42,497 ======
Total Assets		
Wireless Semiconductor Products.  Application Specific Products.  Ceramic Products.  Corporate.	\$ 29,596 11,327 16,685 19,321	\$ 41,508 10,751 20,119 34,303
	\$ 76,929 ======	\$106,681 ======

### Customer Concentration

During fiscal year 1997, 1998 and 1999, one customer, an OEM, accounted for 11%, 25% and 28%, respectively, of the Company's total sales. For fiscal 1999 sales to its two largest customers and their suppliers, represented approximately 40% of the Company's total sales. In fiscal 1997 and 1998, sales to

these OEMs and their suppliers represented approximately 21% and 37% of the Company's total sales, respectively. In fiscal 1999, sales to the Company's 15 largest customers accounted for 64% of total sales. In fiscal 1997 and 1998, sales to these customers accounted for 44% and 63%, respectively. While the Company believes that these emerging wireless markets afford great opportunities, such customer concentration could have an adverse affect on the business.

#### Geographic Information

Sales include export sales primarily to Europe and to a lesser extent Asia, of \$26.7 million, \$39.2 million and \$53.7 million, in fiscal 1997, 1998 and 1999, respectively. During fiscal 1997, 1998 and 1999, the Company operated a sales subsidiary in the United Kingdom. At the end of fiscal 1997, the Company sold its ceramic manufacturing operation in France. The following table shows certain financial information relating to the Company's operations in various geographic areas:

	YEARS ENDED		
	1997	MARCH 29, 1998	MARCH 28, 1999
		(IN THOUSANDS)	
Sales United States Customers	\$ 76.004	\$110,108	\$118.460
Intercompany	6,472	5,665	
Customers	9,249 (6,472)	6,773 (5,665)	7,879 (6,497)
Net sales	\$ 85,253	\$116,881 ======	\$126,339 ======
Income (loss) before taxes United States Europe	\$(13,520) (2,052)	\$ 11,027 420	\$ 19,443 782
Income (loss) before taxes		\$ 11,447 ======	\$ 20,225 ======
	MARCH 30, 1997	MARCH 29, 1998	MARCH 28, 1999
		(IN THOUSANDS)	
Assets United States	\$ 61,547	\$ 72 <b>,</b> 165	\$101,212
Europe	3,706	4,764	5,469
Total assets	\$ 65,253 ======	\$ 76,929 ======	\$106,681 ======

Substantially all of the Company's long-lived assets are located in the United States. Transfers between geographic areas are made at terms that allow for a reasonable profit to the seller.

### NOTE 11 -- SUBSEQUENT EVENT (UNAUDITED)

On April 27, 1999, the Board of Directors approved a plan to reserve up to 675,000 shares of common stock for future grants of stock options to employees. Directors and officers are not eligible to participate in this plan.

\_ \_\_\_\_\_\_

[alpha logo]

ALPHA INDUSTRIES, INC.

3,000,000 SHARES

COMMON STOCK

-----

PROSPECTUS

-----

, 1999

CIBC WORLD MARKETS

PRUDENTIAL SECURITIES

U.S. BANCORP PIPER JAFFRAY

YOU SHOULD RELY ONLY ON THE INFORMATION CONTAINED IN THIS PROSPECTUS. NO DEALER, SALESPERSON OR OTHER PERSON IS AUTHORIZED TO GIVE INFORMATION THAT IS NOT CONTAINED IN THIS PROSPECTUS. THIS PROSPECTUS IS NOT AN OFFER TO SELL NOR IS IT SEEKING AN OFFER TO BUY THESE SECURITIES IN ANY JURISDICTION WHERE THE OFFER OR SALE IS NOT PERMITTED. THE INFORMATION CONTAINED IN THIS PROSPECTUS IS CORRECT ONLY AS OF THE DATE OF THIS PROSPECTUS, REGARDLESS OF THE TIME OF THE DELIVERY OF THIS PROSPECTUS OR ANY SALE OF THESE SECURITIES.

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#### PART TT

#### INFORMATION NOT REQUIRED IN PROSPECTUS

#### ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

SEC Registration Fee.  NASD Filing Fee.  Nasdaq National Market Listing Fee.  Accounting Fees and Expenses.  Legal Fees and Expenses.  Printing.  Blue Sky.	12,079 17,500 75,000* 200,000* 100,000* 10,000*
Miscellaneous	53,231*
TOTAL	500,000*

. \_\_\_\_\_

#### \* Estimated

### ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Article Tenth of our Restated Certificate of Incorporation eliminates the personal liability of directors to us or our stockholders for monetary damages for breaches of their fiduciary duty (subject to certain exceptions, such as breaches of the duty of loyalty to the registrant or its stockholders), and provides that we may indemnify its officers and directors to the full extent permitted by law.

Our Amended and Restated By-Laws include provisions for mandatory indemnification of our officers and directors provided certain conditions are met. Section 145 of the General Corporation Law of the State of Delaware authorizes a corporation to indemnify directors, officers, employees or agents of the corporation in non-derivative suits if such party acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interest of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, as determined in accordance with the Delaware General Corporation Law. Section 145 further provides that indemnification shall be provided if the party in question is successful on the merits or otherwise.

The effect of these provisions would be to permit such indemnification by us for liabilities arising under the Securities Act of 1933, as amended, to the extent permitted under such Act.

We have directors' and officers' liability insurance.

ITEM 16. EXHIBITS

DESCRIPTION

EXHIBIT NUMBER EXHIBITS

1.1	Form of Underwriting Agreement**
3.1	Restated Certificate of Incorporation (Filed as Exhibit 3(a) to Alpha's Registration Statement on Form S-3 (Registration No. 33-63857))*
3.2	Amended and Restated By-Laws of Alpha dated April 30, 1992*
4.1	Specimen Certificate of Common Stock (Filed as Exhibit 4(a) to Alpha's Registration Statement on Form S-3 (Registration No. 33-63857))*
4.2	Description of Capital Stock (contained in the Restated Certificate of Incorporation filed as Exhibit 3(a) to Alpha's Registration Statement on Form S-3 (Registration No. 33-63857))*

### EXHIBIT NUMBER DESCRIPTION

- 5.1 Legal Opinion of Brown, Rudnick, Freed & Gesmer\*\*
- 23.1 Consent of Brown, Rudnick, Freed & Gesmer (included in
- Exhibit 5.1 hereof) \*\*
- 23.2 Consent of KPMG Peat Marwick LLP\*\*
- 24.1 Power of Attorney (included on the signature page of this
  - registration statement) \*\*
  - 27 Financial Data Schedule\*\*

- -----

- \* Not filed herewith. In accordance with Rule 411 promulgated pursuant to the Securities Act of 1933, as amended, reference is made to the documents previously filed with the Commission, which are incorporated by reference herein
- \*\* Filed herewith.

SCHEDULE II -- VALUATION AND QUALIFYING ACCOUNTS

#### ITEM 17. UNDERTAKINGS

- (a) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the registrant's Restated Certificate of Incorporation or Amended and Restated By-Laws, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.
- (b) The undersigned registrant hereby further undertakes that:
  - (1) For purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be initial bona fide offering thereof.
  - (2) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
  - (3) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

#### SIGNATURES

PURSUANT TO THE REQUIREMENTS OF THE SECURITIES ACT OF 1933, THE REGISTRANT CERTIFIES THAT IT HAS REASONABLE GROUNDS TO BELIEVE THAT IT MEETS ALL OF THE REQUIREMENTS FOR FILING ON FORM S-3 AND HAS DULY CAUSED THIS REGISTRATION STATEMENT TO BE SIGNED ON ITS BEHALF BY THE UNDERSIGNED, THEREUNTO DULY AUTHORIZED, IN THE CITY OF WOBURN, COMMONWEALTH OF MASSACHUSETTS, ON MAY 4, 1999.

ALPHA INDUSTRIES, INC.

By: /s/ THOMAS C. LEONARD

Thomas C. Leonard President and Chief Executive Officer

### POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Thomas C. Leonard and Paul E. Vincent his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any or all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto and other documents in connection therewith, and, in connection with any registration of additional securities pursuant to Rule 462(b) under the Securities Act of 1933, as amended, to sign any abbreviated registration statement and any and all amendments thereto, and to file the same, with all exhibits thereto and other documents in connection therewith, in each case, with the Securities and Exchange Commission, granting unto aid attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their substitutes, may lawfully do or cause to be done by virtue hereof.

PURSUANT TO THE REQUIREMENTS OF THE SECURITIES ACT OF 1933, THIS REGISTRATION STATEMENT HAS BEEN SIGNED BY THE FOLLOWING PERSONS IN THE CAPACITIES AND ON THE DATES INDICATED.

0 T 0313 THE

SIGNATURE 	TITLE	DATE 	
/s/ GEORGE S. KARIOTIS	Chairman of the Board	May 2, 1999	
GEORGE S. KARIOTIS			
/s/ THOMAS C. LEONARD	Chief Executive Officer, President and Director	May 4, 1999	
THOMAS C. LEONARD	Fresident and Director		
/s/ PAUL E. VINCENT	Chief Financial Officer Principal Financial Officer	May 4, 1999	
PAUL E. VINCENT	Principal Accounting Officer		
/s/ TIMOTHY R. FUREY	Director	May 3, 1999	
TIMOTHY R. FUREY			

SIGNATURE	TITLE 	DATE 
/s/ ARTHUR PAPPAS	Director M	May 2, 1999
ARTHUR PAPPAS		
/s/ RAYMOND SHAMIE	Director	May 1, 1999
RAYMOND SHAMIE		
/s/ SIDNEY TOPOL	Director	May 4, 1999
SIDNEY TOPOL	_	

# SCHEDULE II VALUATION AND QUALIFYING ACCOUNTS (IN THOUSANDS)

DESCRIPTION	BALANCE AT BEGINNING OF YEAR	CHARGED TO COSTS AND EXPENSES	DEDUCTIONS	BALANCE AT END OF YEAR
Year Ended March 28, 1999 Allowance for doubtful accounts	\$634	\$296	\$189	\$741
Allowance for estimated losses on contracts	\$ 36	\$	\$ 36	\$
Year Ended March 29, 1998				
Allowance for doubtful accounts	\$521	\$257	\$144	\$634
Allowance for estimated losses on contracts	\$ 3	\$ 33	\$	\$ 36
Year Ended March 30, 1997 Allowance for doubtful accounts	\$634	\$206	\$319	\$521
			1	
Allowance for estimated losses on contracts	\$ 24	\$	\$ 21	\$ 3

### EXHIBIT INDEX

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23.1	Consent of Brown, Rudnick, Freed & Gesmer (included in Exhibit 5.1 hereof)**
23.2	Consent of KPMG Peat Marwick LLP**
24.1	Power of Attorney (included on the signature page of this Registration Statement)**
27	Financial Data Schedule**

- -----

<sup>\*</sup> Not filed herewith. In accordance with Rule 411 promulgated pursuant to the Securities Act of 1933, as amended, reference is made to the documents previously filed with the Commission, which are incorporated by reference herein.

<sup>\*\*</sup> Filed herewith.

3,000,000 Shares

ALPHA INDUSTRIES, INC.

Common Stock

UNDERWRITING AGREEMENT

\_\_\_\_**,** 1999

CIBC World Markets Corp.
Prudential Securities Incorporated
U.S. Bancorp Piper Jaffray Inc.
c/o CIBC World Markets Corp.
Oppenheimer Tower
World Financial Center
New York, New York 10281

On behalf of the Several Underwriters named on Schedule I attached hereto.

Ladies and Gentlemen:

Alpha Industries, Inc., a Delaware corporation (the "Company"), proposes to sell to you and the other underwriters named on Schedule I to this Agreement (the "Underwriters"), for whom you are acting as Representatives, an aggregate of 3,000,000 shares (the "Firm Shares") of the Company's Common Stock, \$0.25 par value (the "Common Stock"). In addition, the Company proposes to grant to the Underwriters an option to purchase up to an additional 450,000 shares (the "Option Shares") of Common Stock from it for the purpose of covering over-allotments in connection with the sale of the Firm Shares. The Firm Shares and the Option Shares are together called the "Shares."

1. Sale and Purchase of the Shares.

On the basis of the representations, warranties and agreements contained in, and subject to the terms and conditions of, this Agreement:

- (a) The Company agrees to sell to each of the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase from the Company, at \$\_\_\_\_\_ per share (the "Initial Price"), the number of Firm Shares set forth opposite the name of such Underwriter on Schedule I to this Agreement.
- (b) The Company grants to the several Underwriters an option to purchase, severally and not jointly, all or any part of the Option Shares at the Initial Price. The number of Option Shares to be purchased by each Underwriter shall be the same percentage (adjusted by the Representatives to eliminate fractions) of the total number of Option Shares to be purchased by the Underwriters as such Underwriter is purchasing of the Firm Shares. Such option may be exercised only to cover over-allotments in the sales of the Firm Shares by the Underwriters and may be exercised in whole or in part at any time on or before 12:00 noon, New York City time, on the business day before the Firm Shares Closing Date (as defined below), and only once thereafter within 30 days after the date of this Agreement, in each case upon written or telegraphic notice, or verbal or telephonic notice confirmed by written or telegraphic notice, by the Representatives to the Company no later than 12:00 noon, New York City time, on the business day before the Firm Shares Closing Date or at least two business days before the Option Shares Closing Date (as defined below), as the case may be, setting forth the number of Option Shares to be purchased and the time and date (if other than the Firm Shares Closing Date) of such purchase.

2. Delivery and Payment. Delivery by the Company of the Firm Shares to the Representatives for the respective accounts of the Underwriters, and payment of the purchase price by wire transfer or certified or official bank check or checks payable in New York Clearing House (next day) funds to the Company, shall take place at the offices of CIBC World Markets Corp., at Oppenheimer Tower, World Financial Center, New York, New York 10281, at 10:00 a.m., New York City time, on the third business day following the date of this Agreement, or at such time on such other date, not later than 10 business days after the date of this Agreement, as shall be agreed upon by the Company and the Representatives (such time and date of delivery and payment are called the "Firm Shares Closing Date").

In the event the option with respect to the Option Shares is exercised, delivery by the Company of the Option Shares to the Representatives for the respective accounts of the Underwriters and payment of the purchase price by wire transfer or certified or official bank check or checks payable in New York Clearing House (next day) funds to the Company shall take place at the offices of CIBC World Markets Corp. specified above at the time and on the date (which may be the same date as, but in no event shall be earlier than, the Firm Shares Closing Date) specified in the notice referred to in Section 1(b) (such time and date of delivery and payment are called the "Option Shares Closing Date"). The Firm Shares Closing Date and the Option Shares Closing Date are called, individually, a "Closing Date" and, together, the "Closing Dates."

Certificates evidencing the Shares shall be registered in such names and shall be in such denominations as the Representatives shall request at least two full business days before the Firm Shares Closing Date or, in the case of Option Shares, on the day of notice of exercise of the option as described in Section 1(b) and shall be made available to the Representatives for checking and packaging, at such place as is designated by the Representatives, on the full business day before the Firm Shares Closing Date (or the Option Shares Closing Date in the case of the Option Shares).

3. Registration Statement and Prospectus; Public Offering.

(a) A registration statement (No. 333-) relating to the Shares, including a form of prospectus, has been filed with the Securities and Exchange Commission ("Commission") and either (A) has been declared effective under the Securities Act of 1933 (the "Securities Act") and is not proposed to be amended or (B) is proposed to be amended by amendment or post-effective amendment. If such registration statement (the "initial registration statement") has been declared effective, (A) an additional registration statement (the "additional registration statement") relating to the Shares may have been filed with the Commission pursuant to Rule 462(b) ("Rule 462(b)") under the Securities Act and, if so filed, has become effective upon filing pursuant to such Rule and the Shares all have been duly registered under the Securities Act pursuant to the initial registration statement and, if applicable, the additional registration statement or (B) such an additional registration statement may be proposed to be filed with the Commission pursuant to Rule 462(b) in which case it will become effective upon filing pursuant to such Rule and upon such filing the Shares will all have been duly registered under the Securities Act pursuant to the initial registration statement and such additional registration statement. If the Company does not propose to amend the initial registration statement or if an additional registration statement has been filed and the Company does not propose to amend it, and if any post-effective amendment to either such registration statement has been filed with the Commission prior to the execution and delivery of this Agreement, the most recent amendment (if any) to each such registration statement has been declared effective by the Commission or has become effective upon filing pursuant to Rule 462(c) ("Rule 462(c)") under the Securities Act or, in the case of an additional registration statement, Rule 462(b). For purposes of this Agreement, "Effective Time" with respect to each of the initial registration statement and, if filed prior to the execution and delivery of this Agreement, the additional registration statement means (A) if the Company has advised the Representatives that it does not propose to amend such registration statement, the date and time as of which such registration statement, or the most recent post-effective amendment thereto (if any) filed prior to the execution and delivery of this Agreement, was declared effective by the Commission or has become effective upon filing pursuant to Rule 462(c), or (B) if the Company has advised the Representatives that it proposes to file an amendment or post-effective amendment to such registration statement, the date and time as of which such registration statement, as amended by such amendment or post-effective amendment, as the case may be, is declared effective by the Commission. If an additional registration statement has not been filed prior to the execution and delivery of this Agreement but the Company has advised the Representatives that it proposes to file one, "Effective Time"

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with respect to such additional registration statement means the date and time as of which such registration statement is filed and becomes effective pursuant to Rule 462(b). "Effective Date" with respect to the initial registration statement and the additional registration statement (if any) means the date of the Effective Time thereof. The initial registration statement, as amended at its Effective Time, including all material incorporated by reference therein, including all information contained in the additional registration statement (if any) and deemed to be a part of the initial registration statement as of the Effective Time of the additional registration statement pursuant to the General Instructions of the Form on which it is filed and including all information (if any) deemed to be a part of the initial registration statement as of its Effective Time pursuant to Rule 430A(b) ("Rule 430A(b)") under the Securities Act, is hereinafter referred to as the "Initial Registration Statement". The additional registration statement, as amended at its Effective Time, including the contents of the initial registration statement incorporated by reference therein and including all information (if any) deemed to be a part of the additional registration statement as of its Effective Time pursuant to Rule 430A(b), is hereinafter referred to as the "Additional Registration Statement". The Initial Registration Statement and the Additional Registration Statement, if any, are hereinafter referred to collectively as the "Registration Statements" and individually as a "Registration Statement". The form of prospectus relating to the Shares, as first filed with the Commission pursuant to and in accordance with Rule 424(b) ("Rule 424(b)") under the Securities Act or (if no such filing is required) as included in a Registration Statement, including all material incorporated by reference in such prospectus, is hereinafter referred to as the "Prospectus". No document has been or will be prepared or distributed in reliance on Rule 434 under the Securities Act.

(b) The Company understands that the Underwriters propose to make a public offering of the Shares, as set forth in and pursuant to the Prospectus, as soon after the Effective Time and the date of this Agreement as the Representatives deem advisable. The Company hereby confirms that the Underwriters and dealers have been authorized to distribute or cause to be distributed each preliminary prospectus and are authorized to distribute the Prospectus (as from time to time amended or supplemented if the Company furnishes amendments or supplements thereto to the Underwriters).

4. Representations and Warranties of the Company. The Company hereby represents and warrants to each Underwriter as follows:

(a) If the Effective Time of the Initial Registration Statement is prior to the execution and delivery of this Agreement: (i) on the Effective Date of the Initial Registration Statement, the Initial Registration Statement conformed in all material respects to the requirements of the Securities Act and the rules and regulations of the Commission (the "Rules") and did not include 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, (ii) on the Effective Date of the Additional Registration Statement (if any), each Registration Statement conformed or will conform, in all material respects to the requirements of the Securities Act and the

Rules and did not include, or will not include, any untrue statement of a material fact and did not omit, or will not omit, to state any material fact required to be stated therein or necessary to make the statements therein not misleading, and (iii) on the date of this Agreement, the Initial Registration Statement and, if the Effective Time of the Additional Registration Statement is prior to the execution and delivery of this Agreement, the Additional Registration Statement each conforms, and at the time of filing of the Prospectus pursuant to Rule 424(b) or (if no such filing is required) at the Effective Date of the Additional Registration Statement in which the Prospectus is included, each Registration Statement and the Prospectus will conform, in all material respects to the requirements of the Securities Act and the Rules, and neither of such documents includes, or will include, any untrue statement of a material fact or omits, or will omit, to state any material fact required to be stated therein or necessary to make the statements therein not misleading. If the Effective Time of the Initial Registration Statement is subsequent to the execution and delivery of this Agreement: on the Effective Date of the Initial Registration Statement, the Initial Registration Statement and the Prospectus will conform in all material respects to the requirements of the Act and the Rules, neither of such documents will include any untrue statement of a material fact or will omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading, and no Additional Registration Statement has been or will be filed. Notwithstanding the foregoing, the Company makes no representation or warranty as to the statements contained under the caption "Underwriting" (except for the and paragraphs therein) in the Prospectus. The Company acknowledges that the statements referred to in the previous sentence constitute the only information furnished in writing by the Representatives on behalf of the several Underwriters specifically for inclusion in the Registration Statements, any preliminary prospectus or the Prospectus. The Company and the transactions contemplated by this Agreement meet the requirements for using Form S-3 under the Securities Act.

- (b) All contracts and other documents required to be filed as exhibits to the Registration Statements have been filed with the Commission as exhibits to the Registration Statements.
- (c) The consolidated financial statements of the Company (including all notes and schedules thereto) included or incorporated by reference in the Registration Statements and Prospectus present fairly the financial position, the results of operations and cash flows and the shareholders' equity and the other information purported to be shown therein of the Company at the respective dates and for the respective periods to which they apply; and such financial statements have been prepared in conformity with generally accepted accounting principles, consistently applied throughout the periods involved, and all adjustments necessary for a fair presentation of the results for such periods have been made.

- (d) KPMG Peat Marwick LLP, whose reports are filed with the Commission as a part of the Registration Statements, are and, during the periods covered by their reports, were independent public accountants as required by the Securities Act and the Rules.
- (e) The Company and its "Significant Subsidiaries" as such term is defined in Rule 1-02 of Regulation S-X under the Securities Act (hereinafter, "Significant Subsidiaries") have each been duly incorporated and are validly existing as corporations in good standing under the laws of the jurisdiction of its incorporation. Each of the Company and its Significant Subsidiaries is duly qualified and in good standing as a foreign corporation in each jurisdiction in which the character or location of its assets or properties (owned, leased or licensed) or the nature of its business makes such qualification necessary except for such jurisdictions where the failure to so qualify would not have a material adverse effect on the assets or properties, business, results of operations or financial condition of the Company and its subsidiaries taken as a whole. Each of the Company and its Significant Subsidiaries has all requisite corporate power and authority, and all necessary authorizations, approvals, consents, orders, licenses, certificates and permits of and from all governmental or regulatory bodies or any other person or entity, to own, lease and license its assets and properties and conduct its businesses as now being conducted and as described in the Registration Statements and the Prospectus except for such authorizations, approvals, consents, orders, material licenses, certificates and permits the failure to so obtain would not have a material adverse effect upon the assets or properties, business, results of operations, prospects or condition (financial or otherwise) of the Company and its subsidiaries taken as a whole; no such authorization, approval, consent, order, license, certificate or permit contains a materially burdensome restriction which is required to be disclosed in the Registration Statements and the Prospectus and is not disclosed in the Registration Statements and the Prospectus; and the Company has all such corporate power and authority, and such authorizations, approvals, consents, orders, licenses, certificates and permits to enter into, deliver and perform this Agreement and to issue and sell the Shares.
- (f) Each of the Company and its Significant Subsidiaries owns or possesses adequate and enforceable rights to use all trademarks, trademark applications, trade names, service marks, copyrights, copyright applications, licenses, know-how and other similar rights and proprietary knowledge (collectively, "Intangibles") necessary for the conduct of its business as described in the Registration Statements and the Prospectus. Neither the Company nor any of its subsidiaries has received any notice of, or to its best knowledge is aware of, any infringement of or conflict with asserted rights of others with respect to any Intangibles which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a material adverse effect upon the assets or properties, business, results of operations, prospects or condition (financial or otherwise) of the Company.

- (g) Each of the Company and its subsidiaries has good title to each of the items of personal property which are reflected in the financial statements referred to in Section 4(c) or are referred to in the Registration Statements and the Prospectus as being owned by it and valid and enforceable leasehold interests in each of the items of real and personal property which are referred to in the Registration Statements and the Prospectus as being leased by it, in each case free and clear of all liens, encumbrances, claims, security interests and defects, other than those described in the Registration Statements and the Prospectus and those which do not and will not have a material adverse effect upon the assets or properties, business, results of operations or financial condition of the Company and its subsidiaries taken as a whole.
- (h) There is no litigation or governmental or other proceeding or investigation before any court or before or by any public body or board pending or, to the Company's best knowledge, threatened against, or involving the assets, properties or business of, the Company or any of its subsidiaries which would materially adversely affect the value or the operation of any such assets or properties or the business, results of operations, prospects or condition (financial or otherwise) of the Company and its subsidiaries taken as a whole.
- (i) Subsequent to the respective dates as of which information is given in the Registration Statements and the Prospectus, except as described therein, (i) there has not been any material adverse change in the assets or properties, business, results of operations, prospects or condition (financial or otherwise), of the Company or any of its subsidiaries, whether or not arising from transactions in the ordinary course of business; (ii) neither the Company nor any of its Significant Subsidiaries has sustained any material loss or interference with its assets. businesses or properties (whether owned or leased) from fire, explosion, earthquake, flood or other calamity, whether or not covered by insurance, or from any labor dispute or any court or legislative or other governmental action, order or decree; and (iii) since the date of the latest balance sheet included in the Registration Statements and the Prospectus, except as reflected therein, neither the Company nor any of its subsidiaries has (A) issued any securities or incurred any liability or obligation, direct or contingent, for borrowed money, except such securities issued upon exercise of stock options under the Company's stock option plans, and liabilities or obligations incurred in the ordinary course of business, (B) entered into any transaction not in the ordinary course of business or (C) declared or paid any dividend or made any distribution on any shares of its stock or redeemed, purchased or otherwise acquired or agreed to redeem, purchase or otherwise acquire any shares of its stock.
- (j) There is no document or contract of a character required to be described in the Registration Statements or Prospectus or to be filed as an exhibit to the Registration Statements which is not described or filed as required. Each agreement

listed in the Exhibits to the Registration Statements or incorporated by reference therein is in full force and effect and is valid and enforceable by and against the Company in accordance with its terms, assuming the due authorization, execution and delivery thereof by each of the other parties thereto. Neither the Company, nor to the best of the Company's knowledge, any other party is in default in the observance or performance of any term or obligation to be performed by it under any such agreement, and no event has occurred which with notice or lapse of time or both would constitute such a default, in any such case which default or event would have a material adverse effect on the assets or properties, business, results of operations, prospects or condition (financial or otherwise) of the Company and its subsidiaries taken as a whole. No default exists, and no event has occurred which with notice or lapse of time or both would constitute a default, in the due performance and observance of any term, covenant or condition, by the Company or any of its subsidiaries of any other agreement or instrument to which the Company or any such subsidiary is a party or by which it or its properties or business may be bound or affected which default or event would have a material adverse effect on the assets or properties, business, results of operations, prospects or condition (financial or otherwise) of the Company and its subsidiaries taken as a whole.

- (k) Neither the Company nor any of its subsidiaries is in violation of any term or provision of its charter or by-laws or of any franchise, license, permit, judgment, decree, order, statute, rule or regulation, where the consequences of such violation would have a material adverse effect on the assets or properties, business, results of operations, prospects or condition (financial or otherwise) of the Company and its subsidiaries taken as a whole.
- (1) Neither the execution, delivery and performance of this Agreement by the Company nor the consummation of any of the transactions contemplated hereby (including, without limitation, the issuance and sale by the Company of the Shares) will give rise to a right to terminate or accelerate the due date of any payment due under, or conflict with or result in the breach of any term or provision of, or constitute a default (or an event which with notice or lapse of time or both would constitute a default) under, or require any consent or waiver under, or result in the execution or imposition of any lien, charge or encumbrance upon any properties or assets of the Company or any of its Significant Subsidiaries pursuant to the terms of, any indenture, mortgage, deed of trust or other agreement or instrument to which the Company or any of its Significant Subsidiaries is a party or by which it or any of its properties or businesses is bound, or any franchise, license, permit, judgment, decree, order, statute, rule or regulation applicable to the Company or any of its Significant Subsidiaries or violate any provision of the charter or by-laws of the Company or any of its Significant Subsidiaries, except for such consents or waivers which have already been obtained and are in full force and effect.

- (m) The Company has an authorized and outstanding capital stock as set forth under the caption "Capitalization" in the Prospectus. All of the outstanding shares of Common Stock have been duly and validly issued and are fully paid and nonassessable and none of them was issued in violation of any preemptive or other similar right. The Shares, when issued and sold pursuant to this Agreement, will be duly and validly issued, fully paid and nonassessable and none of them will be issued in violation of any preemptive or other similar right. Except as disclosed in the Registration Statements and the Prospectus, there is no outstanding option, warrant or other right calling for the issuance of, and there is no commitment, plan or arrangement to issue, any share of stock of the Company or any security convertible into, or exercisable or exchangeable for, such stock. The Common Stock and the Shares conform in all material respects to all statements in relation thereto contained or incorporated by reference in the Registration Statements and the Prospectus.
- (n) No holder of any security of the Company has the right to have any security owned by such holder included in the Registration Statements or to demand registration of any security owned by such holder during the period ending 90 days after the date of this Agreement, except any such rights as may have been duly waived. Each director and executive officer of the Company has delivered to the Representatives his enforceable written agreement that he will not, for a period of 90 days after the date of this Agreement, without the prior written consent of CIBC World Markets Corp., offer for sale, sell, distribute, grant any option for the sale of, or otherwise dispose of, directly or indirectly any shares of Common Stock (or any securities convertible into, exercisable for, or exchangeable for any shares of Common Stock) owned by him.
- (o) All necessary corporate action has been duly and validly taken by the Company to authorize the execution, delivery and performance of this Agreement and the issuance and sale of the Shares by the Company. This Agreement has been duly and validly authorized, executed and delivered by the Company and constitutes the legal, valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except (A) as the enforceability thereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting the enforcement of creditors' rights generally and by general equitable principles and (B) to the extent that rights to indemnity or contribution under this Agreement may be limited by Federal and state securities laws or the public policy underlying such laws.
- (p) Neither the Company nor any of its subsidiaries is involved in any labor dispute nor, to the knowledge of the Company, is any such dispute threatened, which dispute would have a material adverse effect on the assets or properties, business, results of operations, prospects or condition (financial or otherwise) of the Company and its subsidiaries taken as a whole.

- (q) No transaction has occurred between or among the Company or any of its subsidiaries and any of its officers or directors or any affiliate or affiliates of any such officer or director that is required to be described in and is not described in the Registration Statements and the Prospectus.
- (r) The Company has not taken, nor will it take, directly or indirectly, any action designed to or which might reasonably be expected to cause or result in, or which has constituted or which might reasonably be expected to constitute, the stabilization or manipulation of the price of the Common Stock to facilitate the sale or resale of any of the Shares.
- (s) The Company has filed all Federal, state, local and foreign tax returns which are required to be filed through the date hereof, or has received extensions thereof, and has paid all taxes shown on such returns and all assessments received by it to the extent that the same are material and have become due.
- (t) The Shares have been duly authorized for quotation on the National Association of Securities Dealers Automated Quotation ("Nasdaq") National Market System.
- (u) The Company has complied with all of the requirements and filed the required forms as specified in Florida Statutes Section 517.075.
- (v) The Company is not and, after giving effect to the offering and sale of the Shares and the application of the net proceeds therefrom as described in the Prospectus, will not be, an "investment company" as defined in the Investment Company Act of 1940
- 5. Conditions of the Underwriters' Obligations. The obligations of the Underwriters under this Agreement are several and not joint. The respective obligations of the Underwriters to purchase the Shares on each Closing Date are subject to each of the following terms and conditions:
  - (a) The Prospectus shall have been timely filed with the Commission in accordance with Section  $6\,(A)\,(a)$  of this Agreement.
  - (b) No order preventing or suspending the use of any preliminary prospectus or the Prospectus shall have been or shall be in effect and no order suspending the effectiveness of the Registration Statement shall be in effect and no proceedings for such purpose shall be pending before or threatened by the Commission, and any requests for additional information on the part of the Commission (to be included in the Registration Statement or the Prospectus or otherwise) shall have been complied with to the satisfaction of the Representatives.

- (c) The representations and warranties of the Company contained in this Agreement and in the certificates delivered pursuant to Section 5(d) shall be true and correct when made and on and as of each Closing Date as if made on such date and the Company shall have performed all covenants and agreements and satisfied all the conditions contained in this Agreement required to be performed or satisfied by it at or before such Closing Date.
- (d) The Representatives shall have received on each Closing Date a certificate, addressed to the Representatives and dated such Closing Date, of the chief executive or chief operating officer and the chief financial officer or chief accounting officer of the Company to the effect that the signers of such certificate have carefully examined the Registration Statement, the Prospectus and this Agreement and that the representations and warranties of the Company in this Agreement are true and correct on and as of such Closing Date with the same effect as if made on such Closing Date and the Company has performed all covenants and agreements and satisfied all conditions contained in this Agreement required to be performed or satisfied by it at or prior to such Closing Date.
- (e) The Representatives shall have received on the Effective Time, at the time this Agreement is executed and on each Closing Date a signed letter from KPMG Peat Marwick LLP addressed to the Representatives and dated, respectively, the Effective Time, the date of this Agreement and each such Closing Date, in form and substance reasonably satisfactory to the Representatives, confirming that they are independent accountants within the meaning of the Securities Act and the Rules and stating in effect that:
- (A) in their opinion the audited financial statements and financial statement schedules examined by them and included in the Registration Statements and the Prospectus and reported on by them comply as to form in all material respects with the applicable accounting requirements of the Securities Act and the Rules;
- (B) on the basis of the review referred to in clause (A) above, a reading of the latest available audited financial statements of the Company, inquiries of officials of the Company who have responsibility for financial and accounting matters and other specified procedures, nothing came to their attention that caused them to believe that with respect to the Company, there were, at a specified date not more than five business days prior to the date of the letter, any increases in the current liabilities and long term liabilities of the Company or any decreases in net income or in working capital or the stockholders' equity in the Company, as compared with the amounts shown on the Company's audited balance sheet for the fiscal year ended March 28, 1999 included in the Registration Statement; and

(C) they have performed certain other procedures as a result of which they determined that certain information of an accounting, financial or statistical nature (which is limited to accounting, financial or statistical information derived from the general accounting records of the Company) set forth in the Registration Statements and the Prospectus and reasonably specified by the Representatives agrees with the accounting records of the Company.

For purposes of this subsection, (i) if the Effective Time of the Initial Registration Statement is subsequent to the execution and delivery of this Agreement, "Registration Statements" shall mean the initial registration statement as proposed to be amended by the amendment or post-effective amendment to be filed shortly prior to its Effective Time, (ii) if the Effective Time of the Initial Registration Statement is prior to the execution and delivery of this Agreement but the Effective Time of the Additional Registration Statement is subsequent to such execution and delivery, "Registration Statements" shall mean the Initial Registration Statement and the additional registration statement as proposed to be filed or as proposed to be amended by the post-effective amendment to be filed shortly prior to its Effective Time, and (iii) "Prospectus" shall mean the prospectus included in the Registration Statements. All financial statements and schedules included in material incorporated by reference into the Prospectus shall be deemed included in the Registration Statements for purposes of this subsection.

- (f) The Representatives shall have received on each Closing Date from Brown Rudnick Freed & Gesmer, counsel for the Company, an opinion, addressed to the Representatives and dated such Closing Date, and stating in effect that:
  - (i) Each of the Company and its Significant Subsidiaries has been duly incorporated and is validly existing as a corporation in good standing under the laws of the jurisdiction in which it is incorporated. Each of the Company and its Significant Subsidiaries is duly qualified and in good standing as a foreign corporation in each of \_\_\_\_\_\_, \_\_\_\_ and \_\_\_\_\_.
  - (ii) Each of the Company and its Significant Subsidiaries has all requisite corporate power and authority to own, lease and license its assets and properties and conduct its business as now being conducted and as described in the Registration Statements and the Prospectus; and the Company has all requisite corporate power and authority and all necessary authorizations, approvals, consents, orders, licenses, certificates and permits to enter into, deliver and perform this Agreement and to issue and sell the Shares.
  - (iii) The Company has authorized and issued capital stock as set forth in the Registration Statements and the Prospectus; the certificates evidencing the Shares are in due and proper legal form and have been duly authorized for issuance by the Company; all of the outstanding shares of Common Stock of the Company have been duly and validly authorized and have been duly and validly issued and are fully paid and nonassessable and none of them was issued in violation of any preemptive or other similar right under the Delaware General Corporation Law or the Company's Certificate of Incorporation or bylaws. The Shares when issued and sold pursuant to this Agreement, will be

duly and validly issued, outstanding, fully paid and nonassessable and none of them will have been issued in violation of any preemptive or other similar right under the Delaware General Corporation Law or the Company's Certificate of Incorporation or bylaws. The Common Stock and the Shares conform in all material respects to the descriptions thereof contained in the Registration Statements and the Prospectus.

- (iv) All necessary corporate action has been duly and validly taken by the Company to authorize the execution, delivery and performance of this Agreement and the issuance and sale of the Shares. This Agreement has been duly and validly authorized, executed and delivered by the Company and constitutes the legal, valid and binding obligation of the Company except (A) as such enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting the enforcement of creditors' rights generally and by general equitable principles and (B) to the extent that rights to indemnity or contribution under this Agreement may be limited by Federal or state securities laws or the public policy underlying such laws.
- (v) Neither the execution, delivery and performance of this Agreement by the Company nor the consummation of any of the transactions contemplated hereby (including, without limitation, the issuance and sale by the Company of the Shares) will give rise to a right to terminate or accelerate the due date of any payment due under, or conflict with or result in the breach of any term or provision of, or constitute a default (or any event which with notice or lapse of time, or both, would constitute a default) under, or require any consent or waiver under, or result in the execution or imposition of any lien, charge or encumbrance upon any properties or assets of the Company or any of its subsidiaries pursuant to the terms of any indenture. mortgage, deed of trust, note or other agreement or instrument filed as an Exhibit to the Registration Statement or incorporated by reference therein or any franchise, license, permit, judgment, decree of or with any United States Federal or Massachusetts court or governmental agency or body or any Delaware court or governmental agency or body acting pursuant to the Delaware General Corporation Law or violate any United States federal or Massachusetts statute, rule or regulation or the Delaware General Corporation Law (other than applicable antitrust provisions of United States Federal securities laws and related state securities laws, as to which such counsel need express no opinion except as otherwise set forth herein) or violate any provision of the charter or by-laws of the Company or any of its Significant Subsidiaries.
- (vi) No consent, approval, authorization or order of or with any United States Federal or Massachusetts court or governmental agency or body or any Delaware court or governmental agency or body acting pursuant to the Delaware General Corporation Law is required for the performance of this Agreement by the Company or the consummation of the transactions

contemplated hereby or thereby, except such as have been obtained under the Securities Act, and such as may be required by the National Association of Securities Dealers, Inc., under state securities or Blue Sky laws in connection with the purchase and distribution of the Shares by the several Underwriters.

(vii) To such counsel's knowledge, there is no litigation or governmental or other proceeding or investigation, before any court or before or by any public body or board pending or threatened against, or involving the assets, properties or businesses of, the Company or any of its subsidiaries which would have a material adverse effect upon the assets or properties, business, results of operations or financial condition of the Company and its subsidiaries taken as a whole.

(viii) The statements in the Prospectus under the captions "Capitalization" (as to authorized shares of Capital Stock), "Certain Transactions" and in Item 15 of the Registration Statement, insofar as such statements constitute a summary of documents referred to therein or matters of law, are accurate summaries of such documents and matters in all material respects and accurately present the information called for with respect to such documents and matters. All contracts and other documents required to be filed as exhibits to, or described in, each Registration Statement have been so filed with the Commission or are fairly described in such Registration Statement, as the case may be.

(ix) Each Registration Statement, all preliminary prospectuses and the Prospectus and each amendment or supplement thereto (except for the financial statements and schedules and other financial and statistical data included therein, as to which such counsel expresses no opinion) comply as to form in all material respects with the requirements of the Securities Act and the Rules.

(x) Each Registration Statement has become effective under the Securities Act, and to such counsel's knowledge no stop order suspending the effectiveness of the Registration Statement has been issued and no proceedings for that purpose have been instituted or are threatened, pending or contemplated.

To the extent deemed advisable by such counsel, they may rely as to matters of fact on certificates of responsible officers of the Company and public officials and on the opinions of other counsel satisfactory to the Representatives as to matters which are governed by laws other than the laws of the Commonwealth of Massachusetts, the Delaware General Corporation Law and the Federal laws of the United States; provided that such counsel shall state that in their opinion the Underwriters and they are justified in relying on such other opinions. Copies of such certificates and other opinions shall be furnished to the Representatives and counsel for the Underwriters.

In addition, such counsel shall state that such counsel has participated in conferences with officers and other representatives of the Company, representatives of the Representatives and representatives of the independent certified public accountants of the Company, at which conferences the contents of the Registration Statement and the Prospectus and related matters were discussed and, although such counsel is not passing upon and does not assume any responsibility for the accuracy, completeness or fairness of the statements contained in the Registration Statement and the Prospectus (except as specified in the foregoing opinion), on the basis of the foregoing, no facts have come to the attention of such counsel which lead such counsel to believe that any Registration Statement at the time it became effective (except with respect to the financial statements and notes and schedules thereto and other financial and statistical data, as to which such counsel need express no belief) contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading, or that the Prospectus as amended or supplemented (except with respect to the financial statements and notes and schedules thereto and other financial and statistical data, as to which such counsel need express no belief) on the date thereof contained any untrue statement of a material fact or omitted to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

- (g) All proceedings taken in connection with the sale of the Firm Shares and the Option Shares as herein contemplated shall be reasonably satisfactory in form and substance to the Representatives and their counsel and the Underwriters shall have received from Hale and Dorr LLP a favorable opinion, addressed to the Representatives and dated such Closing Date, with respect to the Shares, the Registration Statement and the Prospectus, and such other related matters, as the Representatives may reasonably request, and the Company shall have furnished to Hale and Dorr LLP such documents as they may reasonably request for the purpose of enabling them to pass upon such matters.
  - 6. Covenants of the Company.
  - (A) The Company covenants and agrees as follows:
- (a) The Company shall prepare the Prospectus in a form approved by the Representatives and file such Prospectus pursuant to Rule 424(b) under the Securities Act not later than the Commission's close of business on the second business day following the execution and delivery of this Agreement, or, if applicable, such earlier time as may be required by Rule 430A(a)(3) under the Securities Act, and shall promptly advise the Representatives (i) when any amendment to the Registration Statement shall have become effective, (ii) of any request by the Commission for any amendment of the Registration Statement or the Prospectus or for any additional information, (iii) of the prevention or suspension of the use of any preliminary prospectus or the Prospectus or of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or the institution or threatening of any proceeding for that purpose and (iv) of the receipt by the Company of any notification with respect to the suspension of the qualification of the Shares for

sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose. The Company shall not file any amendment of the Registration Statement or supplement to the Prospectus unless the Company has furnished the Representatives a copy for its review prior to filing and shall not file any such proposed amendment or supplement to which the Representatives reasonably object. The Company shall use its best efforts to prevent the issuance of any such stop order and, if issued, to obtain as soon as possible the withdrawal thereof.

- (b) If, at any time when a prospectus relating to the Shares is required to be delivered under the Securities Act and the Rules, any event occurs as a result of which the Prospectus as then amended or supplemented would include any untrue statement of a material fact or omit to state any material fact necessary to make the statements therein in the light of the circumstances under which they were made not misleading, or if it shall be necessary to amend or supplement the Prospectus to comply with the Securities Act or the Rules, the Company promptly shall prepare and file with the Commission, subject to the second sentence of paragraph (a) of this Section 6(A), an amendment or supplement which shall correct such statement or omission or an amendment which shall effect such compliance.
- (c) The Company shall make generally available to its security holders and to the Representatives as soon as practicable, but not later than 45 days after the end of the 12-month period beginning at the end of the fiscal quarter of the Company during which the Effective Time occurs (or 90 days if such 12-month period coincides with the Company's fiscal year), an earnings statement (which need not be audited) of the Company, covering such 12-month period, which shall satisfy the provisions of Section 11(a) of the Securities Act.
- (d) The Company shall furnish to the Representatives and counsel for the Underwriters, without charge, signed copies of the Registration Statements (including all exhibits thereto and amendments thereof) and to each other Underwriter a copy of the Registration Statements (without exhibits thereto) and all amendments thereof and, so long as delivery of a prospectus by an Underwriter or dealer may be required by the Securities Act or the Rules, as many copies of any preliminary prospectus and the Prospectus and any amendments thereof and supplements thereto as the Representatives may reasonably request.
- (e) The Company shall cooperate with the Representatives and their counsel in endeavoring to qualify the Shares for offer and sale under the laws of such jurisdictions as the Representatives may designate and shall maintain such qualifications in effect so long as required for the distribution of the Shares; provided, however, that the Company shall not be required in connection therewith, as a condition thereof, to qualify as a foreign corporation or to execute a general consent to service of process in any jurisdiction or subject itself to taxation as doing business in any jurisdiction.

- (f) For a period of five years after the date of this Agreement, the Company shall supply to the Representatives, and to each other Underwriter who may so request in writing, copies of such financial statements and other periodic and special reports as the Company may from time to time distribute generally to the holders of any class of its capital stock and to furnish to the Representatives a copy of each annual or other report it shall be required to file with the Commission.
- (g) Without the prior written consent of CIBC World Markets Corp., on behalf of the Representatives, for a period of 90 days after the date of this Agreement, the Company shall not issue, sell or register with the Commission (other than on Form S-8 or on any successor form), or otherwise dispose of, directly or indirectly, any equity securities of the Company (or any securities convertible into or exercisable or exchangeable for equity securities of the Company), except for the issuance of the Shares pursuant to the Registration Statement and the issuance of shares pursuant to the Company's existing stock option plans or bonus plans.
- (h) On or before completion of this offering, the Company shall make all filings required under applicable securities laws and by the Nasdaq National Market System (including any required registration under the Exchange Act).

(B) The Company agrees to pay, or reimburse if paid by the Representatives, whether or not the transactions contemplated hereby are consummated or this Agreement is terminated, all costs and expenses incident to the public offering of the Shares and the performance of the obligations of the Company under this Agreement including those relating to: (i) the preparation, printing, filing and distribution of the Registration Statements including all exhibits thereto, each preliminary prospectus, the Prospectus, all amendments and supplements to the Registration Statements and the Prospectus, and the filing and distribution of this Agreement; (ii) the preparation and delivery of certificates for the Shares to the Underwriters; (iii) the registration or qualification of the Shares for offer and sale under the securities or Blue Sky laws of the various jurisdictions referred to in Section 6(A)(e), including the reasonable fees and disbursements of counsel for the Underwriters in connection with such registration and qualification and the preparation, distribution and shipment of preliminary and supplementary Blue Sky memoranda; (iv) the furnishing (including costs of shipping and mailing) to the Representatives and to the Underwriters of copies of each preliminary prospectus, the Prospectus and all amendments or supplements to the Prospectus, and of the several documents required by this Section to be so furnished, as may be reasonably requested for use in connection with the offering and sale of the Shares by the Underwriters or by dealers to whom Shares may be sold; (v) the filing fees of the National Association of Securities Dealers, Inc. in connection with its review of the terms of the public offering; (vi) the furnishing (including costs of shipping and mailing) to the Representatives and to the Underwriters of copies of all reports and information required by Section 6(A)(f); (vii) inclusion of the Shares for quotation on the Nasdaq National Market System; and (viii) all transfer taxes, if any, with respect to the sale and delivery of the Shares by the Company to the Underwriters. Subject to the provisions of Section 9, the Underwriters agree to pay, whether or not the transactions contemplated hereby are consummated or this Agreement is terminated, all costs and expenses incident to the performance of the obligations of the Underwriters under this Agreement not payable by the Company pursuant to

the preceding sentence, including, without limitation, the fees and disbursements of counsel for the Underwriters.

#### 7. Indemnification.

(a) The Company agrees to indemnify and hold harmless each Underwriter and each person, if any, who controls any Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act against any and all losses, claims, damages and liabilities, joint or several (including any reasonable investigation, legal and other expenses incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding or any claim asserted), to which they, or any of them, may become subject under the Securities Act, the Exchange Act or other Federal or state law or regulation, at common law or otherwise, insofar as such losses, claims, damages or liabilities arise out of or are based upon any untrue statement or alleged untrue statement of a material fact contained in any preliminary prospectus, any Registration Statement or the Prospectus or any amendment thereof or supplement thereto, or arise out of or are 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, however, that such indemnity shall not inure to the benefit of any Underwriter (or any person controlling such Underwriter) on account of any losses, claims, damages or liabilities arising from the sale of the Shares to any person by such Underwriter if such untrue statement or omission or alleged untrue statement or omission was made in such preliminary prospectus, such Registration Statement or the Prospectus, or such amendment or supplement, in reliance upon and in conformity with information furnished in writing to the Company by the Representatives on behalf of any Underwriter specifically for use therein; and provided, further, that with respect to any untrue statement or alleged untrue statement in or omission or alleged omission from any preliminary prospectus, the foregoing indemnity agreement contained in this subsection (a) shall not inure to the benefit of any Underwriter from whom the person asserting any losses, claims, damages or liabilities purchased the Shares concerned, to the extent that a prospectus relating to such Shares was required to be delivered by such Underwriter under the Securities Act in connection with such purchase and any such loss, claim, damage or liability of such Underwriter results from the fact that there was not sent or given to such person, at or prior to the written confirmation of the sale of such Shares to such person, a copy of the Prospectus (exclusive of material incorporated by reference) if the Company had previously furnished or caused to be furnished copies thereof to such Underwriter. This indemnity agreement will be in addition to any liability which the Company may otherwise have.

(b) Each Underwriter agrees, severally and not jointly, to indemnify and hold harmless the Company, each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, each director of the Company, and each officer of the Company who signs any Registration Statement, to the same extent as the foregoing indemnity from the Company to each

Underwriter, but only insofar as such losses, claims, damages or liabilities arise out of or are based upon an untrue statement or omission or alleged untrue statement or omission which was made in any preliminary prospectus, such Registration Statement or the Prospectus, or any amendment thereof or supplement thereto, and was contained under the caption "Underwriting" in the Prospectus (except for the \_\_\_\_\_, \_\_\_ and \_\_\_\_ paragraphs therein); provided, however, that the obligation of each Underwriter to indemnify the Company (including any controlling person, director or officer thereof) shall be limited to the net proceeds received by the Company from such Underwriter.

(c) Any party that proposes to assert the right to be indemnified under this Section will, promptly after receipt of notice of commencement of any action, suit or proceeding against such party in respect of which a claim is to be made against an indemnifying party or parties under this Section, notify each such indemnifying party of the commencement of such action, suit or proceeding, enclosing a copy of all papers served. No indemnification provided for in Section 7(a) or 7(b) shall be available to any party who shall fail to give notice as provided in this Section 7(c) if the party to whom notice was not given was unaware of the proceeding to which such notice would have related and was prejudiced by the failure to give such notice but the omission so to notify such indemnifying party of any such action, suit or proceeding shall not relieve it from any liability that it may have to any indemnified party for contribution or otherwise than under this Section. In case any such action, suit or proceeding shall be brought against any indemnified party and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate in, and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel reasonably satisfactory to such indemnified party, and after notice from the indemnifying party to such indemnified party of its election so to assume the defense thereof and the approval by the indemnified party of such counsel, the indemnifying party shall not be liable to such indemnified party for any legal or other expenses, except as provided below and except for the reasonable costs of investigation subsequently incurred by such indemnified party in connection with the defense thereof. The indemnified party shall have the right to employ its counsel in any such action, but the fees and expenses of such counsel shall be at the expense of such indemnified party unless (i) the employment of counsel by such indemnified party has been authorized in writing by the indemnifying parties, (ii) the indemnified party shall have reasonably concluded that there may be a conflict of interest between the indemnifying parties and the indemnified party in the conduct of the defense of such action (in which case the indemnifying parties shall not have the right to direct the defense of such action on behalf of the indemnified party) or (iii) the indemnifying parties shall not have employed counsel to assume the defense of such action within a reasonable time after notice of the commencement thereof, in each of which cases the fees and expenses of counsel shall be at the expense of the indemnifying parties. An indemnifying party shall not be liable for any settlement of any action, suit, proceeding or claim effected without its written consent.

8. Contribution. In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in Section 7(a) is due in accordance with its terms but for any reason is held to be unavailable from the Company, the Company and the Underwriters shall contribute to the aggregate losses, claims, damages and liabilities (including any investigation, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding or any claims asserted, but after deducting any contribution received by the Company from persons other than the Underwriters, such as persons who control the Company within the meaning of the Securities Act, officers of the Company who signed any Registration Statement and directors of the Company, who may also be liable for contribution) to which the Company and one or more of the Underwriters may be subject in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Shares or, if such allocation is not permitted by applicable law or indemnification is not available as a result of the indemnifying party not having received notice as provided in Section ? hereof, in such proportion as is appropriate to reflect not only the relative benefits referred to above but also the relative fault of the Company on the one hand and the Underwriters on the other in connection with the statements or omissions which resulted in such losses, claims, damages, liabilities or expenses, as well as any other relevant equitable considerations. The relative benefits received by the Company and the Underwriters shall be deemed to be in the same proportion as (x) the total proceeds from the offering (net of underwriting discounts but before deducting expenses) received by the Company, as set forth in the table on the cover page of the Prospectus, bear to (y) the underwriting discounts received by the Underwriters, as set forth in the table on the cover page of the Prospectus. The relative fault of the Company or the Underwriters shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or alleged omission to state a material fact related to information supplied by the Company or the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this Section 8 were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above. Notwithstanding the provisions of this Section 8, (i) in no case shall any Underwriter (except as may be provided in the Agreement Among Underwriters) be liable or responsible for any amount in excess of the underwriting discount applicable to the Shares purchased by such Underwriter hereunder, and (ii) the Company shall be liable and responsible for any amount in excess of such underwriting discount; provided, however, that no person quilty 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. For purposes of this Section 8, each person, if any, who controls an Underwriter within the meaning of Section 15 of the Securities Act or Section 20(a) of the Exchange Act shall have the same rights to contribution as such Underwriter, and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20(a) of the Exchange Act, each officer of the Company who shall have signed any Registration Statement and each director of the Company shall have the same rights to contribution as the Company, subject in each case to clauses (i) and (ii) in the immediately preceding sentence of this Section 8. Any party entitled to contribution will, promptly after receipt of notice of commencement of any action, suit or proceeding against such party in respect

of which a claim for contribution may be made against another party or parties under this Section, notify such party or parties from whom contribution may be sought, but the omission so to notify such party or parties from whom contribution may be sought shall not relieve the party or parties from whom contribution may be sought from any other obligation it or they may have hereunder or otherwise than under this Section. No party shall be liable for contribution with respect to any action, suit, proceeding or claim settled without its written consent. The Underwriters' obligations to contribute pursuant to this Section 8 are several in proportion to their respective underwriting commitments and not joint.

 $9.\$ Termination. This Agreement may be terminated with respect to the Shares to be purchased on a Closing Date by the Representatives by notifying the Company at any time

(a) in the absolute discretion of the Representatives at or before any Closing Date: (i) if there shall have occurred any change, or any development or event involving a prospective change, in the condition (financial or other), business, properties or results of operation of the Company or its subsidiaries which, in the judgment of the Representatives, is material and adverse and makes it impractical or inadvisable to proceed with completion of the public offering or the sale of and payment for the Shares; (ii) if on or prior to such date, any domestic or international event or act or occurrence has materially disrupted, or in the opinion of the Representatives will in the future materially disrupt, the securities markets; (iii) if there has occurred any new outbreak or material escalation of hostilities or other calamity or crisis the effect of which on the financial markets of the United States is such as to make it, in the judgment of the Representatives, inadvisable to proceed with the offering; (iv) if there shall be such a material adverse change in general financial, political or economic conditions or the effect of international conditions on the financial markets in the United States is such as to make it. in the judgment of the Representatives, inadvisable or impracticable to market the Shares; (v) if trading in the Shares has been suspended by the Commission or trading generally on the New York Stock Exchange, Inc. or on the Nasdaq American Stock Market Exchange, Inc. has been suspended or limited, or minimum or maximum ranges for prices for securities shall have been fixed, or maximum ranges for prices for securities have been required, by said exchanges or by order of the Commission, the National Association of Securities Dealers, Inc., or any other governmental or regulatory authority; or (vi) if a banking moratorium has been declared by any state or Federal authority, or

(b) at or before any Closing Date, that any of the conditions specified in Section 5 shall not have been fulfilled when and as required by this Agreement.

If this Agreement is terminated pursuant to any of its provisions, the Company shall not be under any liability to any Underwriter, and no Underwriter shall be under any liability to the Company, except that (y) if this Agreement is terminated by the Representatives or the Underwriters because of any failure, refusal or inability on the part of the Company to comply with the terms or to fulfill any of the conditions of this Agreement, the Company will reimburse the Underwriters for all out-of-pocket expenses (including the reasonable fees and

disbursements of their counsel) incurred by them in connection with the proposed purchase and sale of the Shares or in contemplation of performing their obligations hereunder and (z) no Underwriter who shall have failed or refused to purchase the Shares agreed to be purchased by it under this Agreement, without some reason sufficient hereunder to justify cancellation or termination of its obligations under this Agreement, shall be relieved of liability to the Company or to the other Underwriters for damages occasioned by its failure or refusal.

10. Substitution of Underwriters. If one or more of the Underwriters shall fail (other than for a reason sufficient to justify the cancellation or termination of this Agreement under Section 9) to purchase on any Closing Date the Shares agreed to be purchased on such Closing Date by such Underwriter or Underwriters, the Representatives may find one or more substitute underwriters to purchase such Shares or make such other arrangements as the Representatives may deem advisable or one or more of the remaining Underwriters may agree to purchase such Shares in such proportions as may be approved by the Representatives, in each case upon the terms set forth in this Agreement. If no such arrangements have been made by the close of business on the business day following such Closing Date,

(a) if the number of Shares to be purchased by the defaulting Underwriters on such Closing Date shall not exceed 10% of the Shares that all the Underwriters are obligated to purchase on such Closing Date, then each of the nondefaulting Underwriters shall be obligated to purchase such Shares on the terms herein set forth in proportion to their respective obligations hereunder; provided, that in no event shall the maximum number of Shares that any Underwriter has agreed to purchase pursuant to Section 1 be increased pursuant to this Section 10 by more than 10% of such number of Shares without the written consent of such Underwriter,

(b) if the number of Shares to be purchased by the defaulting Underwriters on such Closing Date shall exceed 10% of the Shares that all the Underwriters are obligated to purchase on such Closing Date, then the Company shall be entitled to an additional business day within which it may, but is not obligated to, find one or more substitute underwriters reasonably satisfactory to the Representatives to purchase such Shares upon the terms set forth in this Agreement.

In any such case, either the Representatives or the Company shall have the right to postpone the applicable Closing Date for a period of not more than five business days in order that necessary changes and arrangements (including any necessary amendments or supplements to the Registration Statements or Prospectus) may be effected by the Representatives and the Company. If the number of Shares to be purchased on such Closing Date by such defaulting Underwriter or Underwriters shall exceed 10% of the Shares that all the Underwriters are obligated to purchase on such Closing Date, and none of the nondefaulting Underwriters or the Company shall make arrangements pursuant to this Section within the period stated for the purchase of the Shares that the defaulting Underwriters agreed to purchase, this Agreement shall terminate with respect to the Shares to be purchased on such Closing Date without liability on the part of any nondefaulting Underwriter to the Company and without liability on the part of the Company, except in both cases as provided in Sections  $6\left(B\right)$ , 7, 8 and 9. The provisions of this Section shall not in any way affect the liability of any defaulting Underwriter to the

Company or the nondefaulting Underwriters arising out of such default. A substitute underwriter hereunder shall become an Underwriter for all purposes of this Agreement.

11. Miscellaneous. The respective agreements, representations, warranties, indemnities and other statements of the Company or its officers and of the Underwriters set forth in or made pursuant to this Agreement shall remain in full force and effect, regardless of any investigation made by or on behalf of any Underwriter or the Company or any of the officers, directors or controlling persons referred to in Sections 7 and 8 hereof, and shall survive delivery of and payment for the Shares. The provisions of Sections 6(B), 7, 8 and 9 shall survive the termination or cancellation of this Agreement.

This Agreement has been and is made for the benefit of the Underwriters and the Company and their respective successors and assigns, and, to the extent expressed herein, for the benefit of persons controlling any of the Underwriters, or the Company, and directors and officers of the Company, and their respective successors and assigns, and no other person shall acquire or have any right under or by virtue of this Agreement. The term "successors and assigns" shall not include any purchaser of Shares from any Underwriter merely because of such purchase.

All notices and communications hereunder shall be in writing and mailed or delivered or by telephone or telegraph if subsequently confirmed in writing, (a) if to the Representatives, c/o CIBC World Markets Corp., Oppenheimer Tower, World Financial Center, New York, New York 10281 Attention: Richard D. White, and (b) if to the Company, to its agent for service as such agent's address appears on the cover page of the Initial Registration Statement.

THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO PRINCIPLES OF CONFLICT OF LAWS.

This Agreement may be signed in any number of counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

 $\label{eq:please confirm that the foregoing correctly sets forth the agreement among us. \\$ 

Very truly yours,

ALPHA INDUSTRIES, INC.

Ву

-----

Name: Title:

Confirmed:

CIBC WORLD MARKETS CORP.
PRUDENTIAL SECURITIES INCORPORATED
U.S. BANCORP PIPER JAFFRAY INC.

24
Acting severally on behalf of itself
and as representative of the several
Underwriters named in Schedule I annexed hereto.

By CIBC WORLD MARKETS CORP.

By Title:

25

SCHEDULE I

Name

CIBC World Markets Corp. Prudential Securities Incorporated U.S. Bancorp Piper Jaffray Inc. Number of Firm Shares to Be Purchased

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Total

- 25 -

1

AMENDED AND RESTATED BY-LAWS

OF

ALPHA INDUSTRIES, INC.

A DELAWARE CORPORATION

ADOPTED APRIL 30, 1992

### RESTATED BY-LAWS

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RESTATED BY-LAWS
OF
ALPHA INDUSTRIES, INC.
(A DELAWARE CORPORATION)

# ARTICLE I. Stockholders

SECTION 1.1. ANNUAL MEETING. The annual meeting of the stockholders of the corporation shall be held on the second Monday in September in each year, at such time and place within or without the State of Delaware as may be designated in the notice of meeting. If the day fixed for the annual meeting shall fall on a legal holiday, the meeting shall be held on the next succeeding day not a legal holiday. If the annual meeting is omitted on the day herein provided, a special meeting may be held in place thereof, and any business transacted at such special meeting in lieu of annual meeting shall have the same effect as if transacted or held at the annual meeting.

SECTION 1.2. SPECIAL MEETINGS. Special meetings of the stockholders may be called at any time by the president or by the board of directors. Such call shall state the purpose or purposes of the proposed meeting. Special meetings of the stockholders shall be held at such time, date and place within or without the State of Delaware as may be designated in the notice of such meeting.

SECTION 1.3. NOTICE OF MEETING. A written notice stating the place, date, and hour of each meeting of the stockholders, and, in the case of a special meeting, the purposes for which the meeting is called, shall be given to each stockholder entitled to vote at such meeting, and to each stockholder who, under the Certificate of Incorporation or these By-laws, is entitled to such notice, by delivering such notice to such person or leaving it at their residence or usual place of business, or by mailing it, postage prepaid, and addressed to such stockholder at his address as it appears upon the books of the corporation, at least ten (10) days and not more than sixty (60) before the meeting. Such notice shall be given by the secretary, an assistant secretary, or any other officer or person designated either by the secretary or by the person or persons calling the meeting.

The requirement of notice to any stockholder may be waived by a written waiver of notice, executed before or after the meeting by the stockholder or his attorney thereunto duly authorized, and filed with the records of the meeting, or if communication with such stockholder is unlawful, or by attendance at the meeting without protesting prior thereto or at its commencement the lack of notice. A waiver of notice of any regular or special meeting of the stockholders need not specify the purposes of the meeting.

If a meeting is adjourned to another time or place, notice need not be given of the adjourned meeting if the time and place are announced at the meeting at which the adjournment is taken, except that if the adjournment is for more than thirty days, or if after the adjournment a new

record date is fixed for the adjourned meeting, notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

SECTION 1.4. QUORUM. The holders of a majority in interest of all stock issued, outstanding and entitled to vote at a meeting shall constitute a quorum. Any meeting may be adjourned from time to time by a majority of the votes properly cast upon the question, whether or not a quorum is present.

SECTION 1.5. VOTING AND PROXIES. Each stockholder shall have one vote for each share of stock entitled to vote owned by such stockholder of record according to the books of the corporation, unless otherwise provided by law or by the Certificate of Incorporation. Stockholders may vote either in person or by written proxy, but no proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. Proxies shall be filed with the secretary of the meeting, or of any adjournment thereof. Except as otherwise limited therein, proxies shall entitle the persons authorized thereby to vote at any adjournment of such meeting. A proxy purporting to be executed by or on behalf of a stockholder shall be deemed valid unless challenged at or prior to its exercise and the burden of proving invalidity shall rest on the challenger. A proxy with respect to stock held in the name of two or more persons shall be valid if executed by one of them unless at or prior to exercise of the proxy the corporation receives a specific written notice to the contrary from any one of them.

SECTION 1.6. ACTION AT MEETING. When a quorum is present at any meeting, a plurality of the votes properly cast for election to any office shall elect to such office, and a majority of the votes properly cast upon any question other than election to an office shall decide such question, except where a larger vote is required by law, the Certificate of Incorporation or these by-laws. No ballot shall be required for any election unless requested by a stockholder present or represented at the meeting and entitled to vote in the election.

SECTION 1.7. VOTING OF SHARES OF CERTAIN HOLDERS. Shares of stock of the corporation standing in the name of another corporation, domestic or foreign, may be voted by such officer, agent, or proxy as the by-laws of such corporation may prescribe, or, in the absence of such provision, as the board of directors of such corporation may determine.

Shares of stock of the corporation standing in the name of a deceased person, a minor ward or an incompetent person, may be voted by his administrator, executor, court-appointed guardian or conservator without a transfer of such shares into the name of such administrator, executor, court appointed guardian or conservator. Shares of capital stock of the corporation standing in the name of a trustee may be voted by him.

Shares of stock of the corporation standing in the name of a receiver may be voted by such receiver, and shares held by or under the control of a receiver may be voted by such receiver without the transfer thereof into his name if authority so to do be contained in an appropriate order of the court by which such receiver was appointed.

A stockholder whose shares are pledged shall be entitled to vote such shares until the shares have been transferred into the name of the pledgee, and thereafter the pledgee shall be entitled to vote the shares so transferred.

Shares of its own stock belonging to this corporation shall not be voted, directly or indirectly, at any meeting and shall not be counted in determining the total number of outstanding shares at any given time, but shares of its own Stock held by the corporation in a fiduciary capacity may be voted and shall be counted in determining the total number of outstanding shares.

SECTION 1.8. ADVANCE NOTICE OF STOCKHOLDER PROPOSALS. At any annual or special meeting of stockholders, proposals by stockholders and persons nominated for election as directors by stockholders shall be considered only if advance notice thereof has been timely given as provided herein. Notice of any proposal to be presented by any stockholder or of the name of any person to be nominated by any stockholder for election as a director of the corporation at any meeting of stockholders shall be given to the Secretary of the corporation not less than sixty (60) nor more than ninety (90) days prior to the date of the meeting; provided, however, that if the date of the meeting is first publicly announced or disclosed less than seventy (70) days prior to the date of the meeting, such notice shall be given not more than ten (10) days after such date is first so announced or disclosed. No additional public announcement or disclosure of the date of any annual meeting of stockholders need be made if the corporation shall have previously disclosed, in these by-laws or otherwise, that the annual meeting in each year is to be held on a determinable date, unless and until the Board determines to hold the meeting on a different date. Any stockholder who gives notice of any such proposal shall deliver therewith the text of the proposal to be presented and a brief written statement of the reasons why such stockholder favors the proposal and setting forth such stockholder's name and address, the number and class of all shares of each class of stock of the corporation beneficially owned by such stockholder and any material interest of such stockholder in the proposal (other than as a stockholder) any stockholder desiring to nominate any person for election as a director of the corporation shall deliver with such notice a statement in writing setting forth the stockholder's name and address and the number and class of all shares of each class of stock of the corporation beneficially owned by such stockholder, and, as to each proposed nominee, the name, age and address of the person to be nominated, the number and class of all shares of each class of stock of the corporation beneficially owned by such person, the information regarding such person required by paragraphs (d), (e) and (f) of Item 401 of Regulation S-K adopted by the Securities and Exchange Commission (or the corresponding provisions of any regulation subsequently adopted by the Securities and Exchange Commission applicable to the corporation) and such person 5 signed consent to serve as a director of the corporation if elected. As used herein, shares "beneficially owned" shall mean all shares as to which such person, together with such person 5 affiliates and associates (as defined in Rule 12b-2 under the Securities Exchange Act of 1934), may be deemed to beneficially own pursuant to Rules 13d-3 and 13d-5 under the Securities Exchange Act of 1934, as well as all shares as to which such person, together with such person's affiliates and associates, has the right to become the beneficial owner pursuant to any agreement or understanding, or upon the exercise of warrants, options or rights to convert or exchange (whether such rights are exercisable immediately or only after the passage of time or the occurrence of conditions). The person presiding at the meeting shall determine whether such notice has been duly given and shall direct that proposals and nominees not be considered if such notice has not been duly given.

### ARTICLE II. BOARD OF DIRECTORS

- SECTION 2.1. POWERS. Except as reserved to the stockholders by law, by the Certificate of Incorporation or by these By-laws, the business of the corporation shall be managed under the direction of the board of directors, who shall have and may exercise all of the powers of the corporation. In particular, and without limiting the foregoing, the board of directors shall have the power to issue or reserve for issuance from time to time the whole or any part of the capital stock of the corporation which may be authorized from time to time to such person, for such consideration and upon such terms and conditions as they shall determine, including the granting of options, warrants or conversion or other rights to stock.
- SECTION 2.2. NUMBER OF DIRECTORS; QUALIFICATIONS. The board of directors shall consist of such number of directors, not less than three nor more than fifteen, as shall be fixed by the board of directors in accordance with Article Sixteenth of the Certificate of Incorporation. No director need be a stockholder.
- -SECTION 2.3. NOMINATIONS OF DIRECTORS. Nominations for the election of directors may be made by the Board of Directors, or in accordance with Section 1.8 of these By-Laws, by any stockholder entitled to vote for the election of directors.
- SECTION 2.4. ELECTION OF DIRECTORS. The board of directors shall be divided into three classes and elected by the stockholders in accordance with the provisions of Article Sixteenth of the Certificate of Incorporation.
- SECTION 2.5. VACANCIES; REDUCTION OF THE BOARD. Any vacancy in the board of directors shall be filled by the board of directors in accordance with the provisions of Article Sixteenth of the Certificate of Incorporation. In lieu of filling any such vacancy, the board of directors may reduce the number of directors, but not to a number less than three. When one or more directors shall resign from the board of directors, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective.
- SECTION 2.6. ENLARGEMENT OF THE BOARD. The board of directors may be enlarged by vote of a majority of the directors then in office.
- SECTION 2.7. TENURE AND RESIGNATION. Except as otherwise provided by law, by the Certificate of Incorporation or by these By-laws, directors shall hold office until the next annual meeting of stockholders and thereafter until their successors are chosen and qualified. Any director may resign by delivering or mailing postage prepaid a written resignation to the corporation at its principal office or to the president, secretary or assistant secretary, if any. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

SECTION 2.8. REMOVAL. A director, whether elected by the stockholders or directors, may be removed from office only for cause, either at any annual or special meeting of stockholders by vote of a majority of the stockholders entitled to vote in the election of the directors, or, to the extent permitted by law, by a vote of a majority of the directors then in office; provided, however, that a director may be removed for cause only after reasonable notice and opportunity to be heard before the body proposing to remove him.

SECTION 2.9. MEETINGS. Regular meetings of the board of directors may be held without call or notice at such times and such places within or without the State of Delaware as the board may, from time to time, determine, provided that notice of the first regular meeting following any such determination shall be given to directors absent from the meeting at which such determination is made. A regular meeting of the board of directors shall be held without notice immediately after, and at the same place as, the annual meeting of the stockholders or the special meeting of the stockholders held in place of such annual meeting, unless a quorum of the directors is not then present. Special meetings of the board of directors may be held at any time and at any place designated in the call of the meeting when called by the president, secretary, or one or more directors. Members of the board of directors or any committee elected thereby may participate in a meeting of such board or committee by means of a conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other at the same time, and participation by such means shall constitute presence in person at the meeting.

SECTION 2.10. NOTICE OF MEETING. It shall be sufficient notice to a director to send notice by mail at least seventy-two (72) hours before the meeting addressed to such person at his usual or last known business or residence address or to give notice to such person in person or by telephone at least twelve(12) hours before the meeting. Notice shall be given by the secretary, assistant secretary, if any, or by the officer or directors calling the meeting. The requirement of notice to any director may be waived by a written waiver of notice, executed by such person before or after the meeting or meetings, and filed with the records of the meeting, or by attendance at the meeting without protesting prior thereto or at its commencement the lack of notice. A notice or waiver of notice of a directors' meeting need not specify the purposes of the meeting.

SECTION 2.11. AGENDA. Any lawful business may be transacted at a meeting of the board of directors, notwithstanding the fact that the nature of the business may not have been specified in the notice or waiver of notice of the meeting.

SECTION 2.12. QUORUM. At any meeting of the board of directors, a majority of the directors then in office shall constitute a quorum for the transaction of business. Any meeting may be adjourned by a majority of the votes cast upon the question, whether or not a quorum is present, and the meeting may be held as adjourned without further notice.

SECTION 2.13. ACTION AT MEETING. Any motion adopted by vote of the majority of the directors present at a meeting at which a quorum is present shall be the act of the board of

directors, except where a different vote is required by law, by the Certificate of Incorporation or by these By-laws. The assent in writing of any director to any vote or action of the directors taken at any meeting, whether or not a quorum was present and whether or not the director had or waived notice of the meeting, shall have the same effect as if the director so assenting was present at such meeting and voted in favor of such vote or action.

SECTION 2.14. ACTION WITHOUT MEETING. Any action by the directors may be taken without a meeting if all of the directors consent to the action in writing and the consents are filed with the records of the directors' meetings. Such consent shall be treated for all purposes as a vote of the directors at a meeting.

SECTION 2.15. COMMITTEES. The board of directors may, by the affirmative vote of a majority of the directors then in office, appoint an executive committee or other committees consisting of one or more directors and may by vote delegate to any such committee some or all of their powers except those which by law, the Certificate of Incorporation or these By-laws they may not delegate. Unless the board of directors shall otherwise provide, any such committee may make rules for the conduct of its business, but unless otherwise provided by the board of directors or such rules, its meetings shall be called, notice given or waived, its business conducted or its action taken as nearly as may be in the same manner as is provided in these By-laws with respect to meetings or for the conduct of business or the taking of actions by the board of directors. The board of directors shall have power at any time to fill vacancies in, change the membership of, or discharge any such committee at any time. The board of directors shall have power to rescind any action of any committee, but no such rescission shall have retroactive effect.

# ARTICLE III. OFFICERS

SECTION 3.1. ENUMERATION. The officers shall consist of a chairman of the board of directors, a president, a treasurer, a secretary and such other officers and agents (including one or more vice-presidents, assistant treasurers and assistant secretaries), with such duties and powers, as the board of directors may, in their discretion, determine.

SECTION 3.2. ELECTION. The president, treasurer and secretary shall be elected annually by the directors at their first meeting following the annual meeting of the stockholders. Other officers may be chosen by the directors at such meeting or at any other meeting.

SECTION 3.3. QUALIFICATION. An officer may, but need not, be a director or stockholder. Any two or more offices may be held by the same person. Any officer may be required by the directors to give bond for the faithful performance of his duties to the corporation in such amount and with such sureties as the directors may determine. The premiums for such bonds may be paid by the corporation.

SECTION 3.4. TENURE. Except as otherwise provided by the Certificate of Incorporation or these

By-laws, the term of office of each officer shall be for one year or until his successor is elected and qualified or until his earlier resignation or removal.

SECTION 3.5. REMOVAL. Any officer may be removed from office, with or without cause, by the affirmative vote of a majority of the directors then in office; provided, however, that an officer may be removed for cause only after reasonable notice and opportunity to be heard by the board of directors prior to action thereon.

SECTION 3.6. RESIGNATION. Any officer may resign by delivering or mailing postage prepaid a written resignation to the corporation at its principal office or to the president, secretary, or assistant secretary, if any, and such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some event.

SECTION 3.7. VACANCIES. A vacancy in any office arising from any cause may be filled for the unexpired portion of the term by the board of directors.

SECTION 3.8. CHAIRMAN OF THE BOARD. The chairman of the board of directors shall preside at all meetings of the board of directors, and shall have such duties and powers as the board of directors may from time to time determine.

SECTION 3.9. PRESIDENT. Except as otherwise voted by the board or directors, the president shall preside at all meetings of the stockholders, and at meetings of the board of directors in the absence of the chairman of the board. The president shall have such duties and powers as are commonly incident to the office and such duties and powers as the board of directors shall from time to time designate.

SECTION 3.10. VICE-PRESIDENTS. The vice-president, or if there shall be more than one, the vice-presidents in the order determined by the board of directors, shall, in the absence or disability of the president, perform the duties and exercise the powers of the president. In addition, the vice presidents shall have such powers and perform such duties as the board of directors may from time to time determine.

SECTION 3.11. TREASURER AND ASSISTANT TREASURERS. The treasurer, subject to the direction and under the supervision and control of the board of directors, shall have general charge of the financial affairs of the corporation. The treasurer shall have custody of all funds, securities and valuable papers of the corporation, except as the board of directors may otherwise provide. The treasurer shall keep or cause to be kept full and accurate records of account which shall be the property of the corporation, and which shall be always open to the inspection of each elected officer and director of the corporation. The treasurer shall deposit or cause to be deposited all funds of the corporation in such depository or depositories as may be authorized by the board of directors. The treasurer shall have the power to endorse for deposit or collection all notes, checks, drafts, and other negotiable instruments payable to the corporation. The treasurer shall have the power to borrow money and enter into and execute arrangements as to advances, loans and credits to the corporation. The treasurer shall have authority to disburse funds as may be ordered by the board of directors, maintaining proper records thereof, and shall render to the president and board of directors, when they so request,

an account of his transactions as treasurer and the financial condition of the corporation. The treasurer shall perform such other duties as are incidental to the office, and such other duties as may be assigned by the board of directors.

Assistant treasurers, if any, shall have such powers and perform such duties as the board of directors may from time to time determine.

SECTION 3.12. SECRETARY AND ASSISTANT SECRETARIES. The secretary shall record, or cause to be recorded, all proceedings of the meetings of the stockholders and directors (including committees thereof) in the book of records of this corporation. The secretary shall notify the stockholders and directors, when required by law or by these By-laws, of their respective meetings, and shall perform such other duties as the directors and stockholders may from time to time prescribe. The secretary shall have the custody and charge of the corporate seal, and shall affix the seal of the corporation to all instruments requiring such seal, and shall certify under the corporate seal the proceedings of the directors and of the stockholders, when required. In the absence of the secretary at any such meeting, a temporary secretary shall be chosen who shall record the proceedings of the meeting in the aforesaid books.

Assistant secretaries, if any, shall have such powers and perform such duties as the board of directors may from time to time designate.

SECTION 3.13. OTHER POWERS AND DUTIES. Subject to these By-laws and to such limitations as the board of directors may from time to time prescribe, the officers of the corporation shall each have such powers and duties as generally pertain to their respective offices, as well as such powers and duties as from time to time may be conferred by the board of directors.

## ARTICLE IV.

SECTION 4.1. STOCK CERTIFICATES. Each stockholder shall be entitled to a certificate representing the number of shares of the capital stock of the corporation owned by such person in such form as shall, in conformity to law, be prescribed from time to time by the board of directors. Each certificate shall be signed by the president or vice-president and treasurer or assistant treasurer or such other officers designated by the board of directors from time to time as permitted by law, shall bear the seal of the corporation, and shall express on its face its number, date of issue, class, the number of shares for which, and the name of the person to whom it is issued. The corporate seal and any or all of the signatures of corporation officers may be facsimile if the stock certificate is manually counter-signed by an authorized person on behalf of a transfer agent or registrar other than the corporation or its employee.

If an officer, transfer agent or registrar who has signed, or whose facsimile signature has been placed on, a certificate shall have ceased to be such before the certificate is issued, it may be issued by the corporation with the same effect as if he were such officer, transfer agent or registrar at the time of its issue.

SECTION 4.2. TRANSFER OF SHARES. Title to a certificate of stock and to the shares represented thereby shall be transferred only on the books of the corporation by delivery to the corporation or its transfer agent of the certificate properly endorsed, or by delivery of the certificate accompanied by a written assignment of the same, or a properly executed written power of attorney to sell, assign or transfer the same or the shares represented thereby. Upon surrender of a certificate for the shares being transferred, a new certificate or certificates shall be issued according to the interests of the parties.

SECTION 4.3. RECORD HOLDERS. Except as otherwise may be required by law, by the Certificate of Incorporation or by these By-laws, the corporation shall be entitled to treat the record holder of stock as shown on its books as the owner of such stock for all purposes, including the payment of dividends and the right to vote with respect thereto, regardless of any transfer, pledge or other disposition of such stock, until the shares have been transferred on the books of the corporation in accordance with the requirements of these By-laws.

It shall be the duty of each stockholder to notify the corporation of his post office address.

SECTION 4.4. RECORD DATE. In order that the corporation may determine the stockholders entitled to receive notice of or to vote at any meeting of stockholders or any adjournments thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the board of directors may fix, in advance, a record date, which shall not be more than sixty days prior to any other action. In such case only stockholders of record on such record date shall be so entitled, notwithstanding any transfer of stock on the books of the corporation after the record date.

If no record date is fixed: (i) the record date for determining stockholders entitled to receive notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held; (ii) the record date for determining stockholders entitled to express consent to corporate action in writing without a meeting, when no prior action by the board of directors is necessary, shall be the day on which the first written consent is expressed; and (iii) the record date for determining stockholders for any other purpose shall be at the close of business on the day on which the board of directors adopts the resolution relating thereto.

SECTION 4.5. TRANSFER AGENT AND REGISTRAR FOR SHARES OF CORPORATION. The board of directors may appoint a transfer agent and a registrar of the certificates of stock of the corporation. Any transfer agent so appointed shall maintain, among other records, a stockholders' ledger, setting forth the names and addresses of the holders of all issued shares of stock of the corporation, the number of shares held by each, the certificate numbers representing such shares, and the date of issue of the certificates representing such shares. Any registrar so appointed shall maintain, among other records, a share register, setting forth

the total number of shares of each class of shares which the corporation is authorized to issue and the total number of shares actually issued. The stockholders' ledger and the share register are hereby identified as the stock transfer books of the corporation; but as between the stockholders' ledger and the share register, the names and addresses of stockholders, as they appear on the stockholders' ledger maintained by the transfer agent shall be the official list of stockholders of record of the corporation. The name and address of each stockholder of record, as they appear upon the stockholders ledger, shall be conclusive evidence of who are the stockholders entitled to receive notice of the meetings of stockholders, to vote at such meetings, to examine a complete list of the stockholders entitled to vote at meetings, and to own, enjoy and exercise any other property or rights deriving from such shares against the corporation. Stockholders, but not the corporation, its directors, officers, agents or attorneys, shall be responsible for notifying the transfer agent, in writing, of any changes in their names or addresses from time to time, and failure to do so will relieve the corporation, its other stockholders, directors, officers, agents and attorneys, and its transfer agent and registrar, of liability for failure to direct notices or other documents, or pay over or transfer dividends or other property or rights, to a name or address other than the name and address appearing in the stockholders' ledger maintained by the transfer agent.

SECTION 4.6. LOSS OF CERTIFICATES. In case of the loss, destruction or mutilation of a certificate of stock, a replacement certificate may be issued in place thereof upon such terms as the board of directors may prescribe, including, in the discretion of the board of directors, a requirement of bond and indemnity to the corporation.

SECTION 4.7. RESTRICTIONS ON TRANSFER. Every certificate for shares of stock which are subject to any restriction on transfer, whether pursuant to the Certificate of Incorporation, the By-laws or any agreement to which the corporation is a party, shall have the fact of the restriction noted conspicuously on the certificate and snail also set forth on the face or back either the full text of the restriction or a statement that the corporation will furnish a copy to the holder of such certificate upon written request and without charge.

SECTION 4.8. MULTIPLE CLASSES OF STOCK The amount and classes of the capital stock and the par value, if any, of the shares, shall be as fixed in the Certificate of Incorporation. At all times when there are two or more classes of stock, the several classes of stock shall conform to the description and the terms and have the respective preferences, voting powers, restrictions and qualifications set forth in the Certificate of Incorporation and these By-laws. Every certificate issued when the corporation is authorized to issue more than one class or series of stock shall set forth on its face or back either (i) the full text of the preferences, voting powers, qualifications and special and relative rights of the shares of each class and series authorized to be issued, or (ii) a statement of the existence of such preferences, powers, qualifications and rights, and a statement that the corporation will furnish a copy thereof to the holder of such certificate upon written request and without charge.

ARTICLE V.

SECTION 5.1. DECLARATION OF DIVIDENDS. Except as otherwise required by law or by the Certificate of Incorporation, the board of directors may, in its discretion, declare what, if any, dividends shall be paid from the surplus or from the net profits of the corporation upon the stock of the corporation; provided, however, that no dividend shall be declared or paid the payment of which would diminish the amount of the paid-in capital of the corporation. Dividends may be paid in cash, in property, in shares of the corporation's stock, or in any combination thereof. Dividends shall be payable upon such dates as the board of directors may designate.

SECTION 5.2. RESERVES. Before the payment of any dividend and before making any distribution of profits, the board of directors, from time to time and in its absolute discretion, shall have power to set aside out of the surplus or net profits of the corporation such sum or sums as the board of directors deems proper and sufficient as a reserve fund to meet contingencies or for such other purpose as the board of directors shall deem to be in the best interests of the corporation, and the board of directors may modify or abolish any such reserve.

# ARTICLE VI. POWERS OF OFFICERS TO CONTRACT WITH THE CORPORATION

Any and all of the directors and officers of the corporation, notwithstanding their official relations to it, may enter into and perform any contract or transaction of any nature between the corporation and themselves, or any and all of the individuals from time to time constituting the board of directors of the corporation, or any firm or corporation in which any such director may be interested, directly or indirectly, whether such individual, firm or corporation thus dealing with the corporation shall thereby derive personal or corporate profits or benefits or otherwise; provided, that (i) the material facts as to such person 5 relationship or interest and as to the contract or transaction are disclosed or are known to the board of directors or committee thereof which authorizes such contract or transaction and the contract or transaction is specifically approved in good faith by a vote of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; (ii) if the material facts as to such person 5 relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract is specifically approved in good faith by a vote of the stockholders; or (iii) the contract or transaction is fair as to the corporation as of the time it is authorized, approved or ratified by the board of directors, a committee thereof, or the stockholders. Any director of the corporation who is interested in any transaction as aforesaid may nevertheless be counted in determining the existence of a quorum at any meeting of the board of directors which shall authorize or ratify any such transaction. This Article shall not be construed to invalidate any contract or other transaction which would otherwise be valid under the common or statutory law applicable thereto.

### ARTICLE VII.

SECTION 7.1. DEFINITIONS. For purpose of this Article VII:

- (a) "Covered Person" means an individual: (i) who is a present or former director or officer of the corporation or who at the request of the Corporation serves or has served a partner-ship or joint venture to which the corporation is a party, a nominee trust established by the corporation, or an employee benefit plan sponsored by the corporation in one of those capacities or as trustee, partner or fiduciary and (ii) who by reason of his position was, is, or is threatened to be made a party to a Proceeding. It shall also include such person's legal representatives, heirs, executors and administrators.
- (b) "Proceeding" includes any threatened, pending, or completed action, suit, or proceeding, whether civil, criminal, administrative, or investigative (including any internal corporate investigation), and any claim which could be the subject of such a Proceeding.
- (c) "Expenses means all reasonable attorneys fees, retainers, costs, fees of accountants and experts, witness fees, travel expenses and all other disbursements or expenses of the types customarily incurred in connection with prosecuting, defending, investigating or being or preparing to be a witness in a Proceeding and all liabilities, including but not limited to amounts paid in satisfaction of judgments, in compromises, as fines or penalties and amounts paid in settlement, which amounts have been actually and reasonably incurred in connection with any such Proceeding.
- SECTION 7.2. ACTIONS BY OR IN NAME OF THE CORPORATION. THE corporation shall indemnify any Covered Person against all Expenses incurred in connection with the defense or disposition of any Proceeding by or in the name of the corporation if the Covered Person acted in good faith, and in a manner he reasonably believed to be in, or not opposed to, the best interests of the corporation, and with respect to any Proceeding which is criminal in nature, he had no reasonable cause to believe his conduct was unlawful, except that no indemnification shall be made with respect to any matter as to which such Covered Person has been adjudicated liable to the corporation, unless, and only to the extent that, the Court of Chancery or the court deciding the action determines that such Covered Person is entitled to indemnification.

Such indemnification may be provided in connection with a Proceeding in which it is claimed that an officer or director received an improper personal benefit by reason of his position, regardless or whether the claim involves his service in such capacity, subject to the foregoing limitations and to the additional limitation that it shall not have been finally determined that an improper personal benefit was received by the director or officer.

SECTION 7.3. OTHER ACTIONS. The corporation shall indemnify any Covered Person against any

Expenses incurred in connection with the defense or disposition of any Proceeding, other than a Proceeding of the type described in Section 7.2, if the Covered Person acted in good faith, in a manner he reasonably believed to be in, or not opposed to, the best interests of the corporation, and with respect to any criminal actions or proceeding, had no reasonable cause to believe his conduct was unlawful.

SECTION 7.4. INDEMNIFICATION UPON SUCCESSFUL DEFENSE. Notwithstanding anything to the contrary in Section 7.2 or 7.3, to the extent any Covered Person has been successful on the merits or otherwise in the defense of any Proceeding such Covered Person shall be indemnified by the corporation against all Expenses incurred by him in connection therewith.

SECTION 7.5. ADVANCES OF EXPENSES. The corporation shall advance attorneys' fees or other Expenses incurred by or on behalf of a Covered Person in defending a Proceeding, upon a written request therefor and receipt of an undertaking by or on behalf of the Covered Person to repay the amount advanced if it shall ultimately be determined that he is not entitled to be indemnified by the Corporation for such Expenses.

SECTION 7.6. EMPLOYEES AND AGENTS; OFFICERS AND DIRECTORS OF OTHER CORPORATIONS OR ENTERPRISES. The corporation may, to the extent authorized from time to time by the Board of Directors, grant indemnification and the advancement of Expenses to any employee or agent of the corporation or to any officer or director of any other corporation or other enterprise who serves or has served as such at the request of the corporation. Upon such authorization by the Board of Directors, such person shall be deemed to be a "Covered Person" for the purposes of this Article.

SECTION 7.7. PRESUMPTION UPON TERMINATION OF PROCEEDING. The termination of any Proceeding by judgment, order, settlement, conviction, or upon a plea of nob contendere or its equivalent, shall not, of itself, create a presumption that a person did not act in good faith and in a manner which he reasonably believed to be in, or not opposed to, the best interests of the corporation and, with respect to any criminal action or proceeding, did not have reasonable cause to believe that his conduct was lawful.

SECTION 7.8. INDEMNIFICATION NOT EXCLUSIVE. The right of indemnification and advancement of Expenses provided by or granted pursuant to this Article VII shall not be exclusive of or affect any other rights to which any such Covered Person seeking indemnification or advancement of Expenses may be entitled.

SECTION 7.9. INSURANCE. The corporation may purchase and maintain insurance on its behalf and on behalf of any officer, director, employee or agent against any liability asserted against and incurred by him in any capacity, or arising out of his status as such, whether or not the corporation would have the power to indemnify him against such liability under the provisions of this Article VII.

SECTION 7.10. EMPLOYEE BENEFIT PLANS. If the corporation or any of its subsidiaries or affiliates sponsors any employee benefit plan, and any officer, director, employee or agent under-takes or incurs any responsibility as a fiduciary with respect thereto then, for purposes

of indemnification of such person under this Article VII, (I) such person shall be deemed not to have failed to have acted in good faith and in the reasonable belief that his action was in the best interests of the corporation if he acted in good faith and in the reasonable belief that his action was in the best interests of the participants or beneficiaries of said plan, and (ii) "Expense" shall be deemed to include any taxes or penalties assessed on such person with respect to said plan under applicable law.

SECTION 7.11. SURVIVAL. The indemnification provisions in this Article shall be deemed to be a contract between the corporation and each director, officer, employee and agent who is or is deemed to be a Covered Person hereunder at any time while these provisions as well as the relevant provisions of the Delaware General Corporation Law are in effect and any repeal or modification thereof shall not affect any right or obligation then existing with respect to any state of facts then or previously existing or any action, suit, or Proceeding previously or thereafter brought or threatened based in whole or in part upon any such state of facts. Such a "contract right" may not be modified retroactively without the consent of such director, officer, employee or agent.

SECTION 7.12 SEVERABILITY. If this Article or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the corporation shall nevertheless indemnify each Covered Person and may indemnify each person who under Section 7.6 may be deemed to be a Covered Person as to all Expenses to the fullest extent permitted by any applicable portion of this Article that shall not have invalidated and to the fullest extent permitted by applicable law.

SECTION 7.13.RIGHT TO INDEMNIFICATION UPON APPLICATION; DETERMINATION TO INDEMNIFY. Indemnification under Sections 7.2 or Section 7.3 hereof shall be made no later than forty-five (45) days after the corporation is given written request therefor by or on behalf of the Covered Person in accordance with Section 7.14 hereof. Unless prohibited by the express provisions of an applicable statute in a specific case, indemnification pursuant to Section 7.2 or 7.3 hereof and the advancement of Expenses pursuant to Section 7.5 hereof, as the case may be, shall be automatic and shall not require the approval of the Board of Directors or of the stockholders of the corporation, or of any other person or body. If such an applicable statute does, how-ever, expressly prohibit such mandatory indemnification in any such specific case, the corporation, nevertheless, shall promptly cause a meeting of its Board of Directors or stockholders, as the case may be, to be called and held (or, if permitted to take action by written consent in lieu of a meeting to obtain the requisite written consents) to take action within thirty (30) days of the written request for indemnification pursuant to Sections 7.2 or 7.3 or the advancement of Expenses pursuant to Section 7.5, as the case may be, to determine whether to approve such request. Such determination shall be made (a) by the Board of Directors of the Corporation by a majority vote of a quorum consisting of Directors who were not parties to the Proceeding which is the subject of the request, or (b) if such a quorum is not obtainable, or, even if obtainable if a quorum of disinterested Directors so directs, by independent legal counsel in a written opinion, or (c) by the stockholders. Immediately upon such determination being so made, the corporation shall furnish the indemnification or advancement requested subject to the pro-visions of Section 7.14 hereof. If a determination is made not to indemnify the Covered Person or make the advancement, the Covered Person

shall have the right to seek an independent determination in favor of the request for indemnification or the advancement from any court of competent jurisdiction and an order requiring the corporation to make the requested payments or to take such other action as ordered by such court. If the corporation does not respond to a written request for indemnification pursuant to Sections 7.2 and 7.3 hereof or the advancement of Expenses pursuant to Section 7.5, as the case may be, within said thirty (30) day period, the Corporation shall be deemed to have waived the right to require that the request be approved by the Board of Directors or the stockholders of the corporation or by any other person or body.

SECTION 7.14 NOTIFICATION AND DEFENSE OF CLAIM. Promptly after receipt by an Covered Person of notice of the commencement of any Proceeding, such Covered Person shall, if a claim is to be made against the corporation under this Article, notify the corporation of the commencement of the Proceeding. The omission so to notify the corporation will not relieve it from any liability which it may have to such Covered Person otherwise than under this Article. With respect to any such Proceedings:

- (a) The corporation will be entitled to participate in the defense at its own expense.
- (b) Except as otherwise provided below, the corporation jointly with any other indemnifying party similarly notified will be entitled to assume the defense with counsel reasonably satisfactory to the Covered Person. After notice from the corporation to Covered Person of its election to assume the defense of a suit, the corporation will not be liable to the Covered Person under this Article for any legal fees and expenses subsequently incurred by the Covered Person in connection with the defense of the Proceeding other than as provided below. The Covered Person shall have the right to employ his own counsel and conduct his own defense in such Proceeding but all legal fees and expenses incurred by or on behalf of him after notice from the corporation of its assumption of the defense shall be at the expense of the Covered Person unless (I) the employment of counsel by the Covered Person has been authorized by the corporation, (ii) the Covered Person shall have concluded reasonably that there is a conflict of interest between the corporation and the Covered Person in the conduct of the defense of such action and such conclusion is confirmed in writing by the outside counsel employed by the corporation to represent the Covered Person in such Proceeding, or (iii) the corporation shall not in fact have employed counsel to assume the defense of such Proceeding, in each of which cases the legal fees and expenses of counsel shall be at the expense of the corporation.
- (c) Notwithstanding any provision of this Article to the contrary, the corporation shall not be liable to indemnify the Covered Person under this Article for any amounts paid in settlement of any Proceeding or claim effected without its prior written consent.

# ARTICLE VIII. MISCELLANEOUS PROVISIONS

SECTION 8.1. CERTIFICATE OF INCORPORATION. All references in these By-laws to the Certificate

of Incorporation shall be deemed to refer to the Certificate of Incorporation of the corporation, as amended and in effect from time to time.

SECTION 8.2. FISCAL YEAR. Except as from time to time otherwise provided by the board of directors, the fiscal year of the corporation shall end on the last day of March of each year.

SECTION 8.3. CORPORATE SEAL. The board of directors shall have the power to adopt and alter the seal of the corporation.

SECTION 8.4. EXECUTION OF INSTRUMENTS. All deeds, leases, transfers, contracts, bonds, notes, and other obligations authorized to be executed by an officer of the corporation on its behalf shall be signed by the president or the treasurer except as the board of directors may generally or in particular cases otherwise determine.

SECTION 8.5. VOTING OF SECURITIES. Unless the board of directors otherwise provides, the president or the treasurer may waive notice of and act on behalf of this corporation, or appoint another person or persons to act as proxy or attorney in fact for this corporation with or without discretionary power and/or power of substitution, at any meeting of stockholders or shareholders of any other corporation or organization, any of whose securities are held by this corporation.

SECTION 8.6. EVIDENCE OF AUTHORITY. A certificate by the secretary or any assistant secretary as to any action taken by the stockholders, directors or any officer or representative of the corporation shall, as to all persons who rely thereon in good faith, be conclusive evidence of such action. The exercise of any power which by law, by the Certificate of Incorporation, or by these By-laws, or under any vote of the stockholders or the board of directors, may be exercised by an officer of the corporation only in the event of absence of another officer or any other contingency shall bind the corporation in favor of anyone relying thereon in good faith, whether or not such absence or contingency existed.

SECTION 8.7. CORPORATE RECORDS. The original, or attested copies, of the Certificate of Incorporation, By-laws, records of all meetings of the incorporators and stockholders, and the stock transfer books (which shall contain the names of all stockholders and the record address and the amount of stock held by each) shall be kept in Delaware at the principal office of the corporation, or at an office of the corporation, or at an office of the secretary or of the assistant secretary, if any. Said copies and records need not all be kept in the same office. They shall be available for inspection of any stockholder to the extent required by law.

SECTION 8.8. CHARITABLE CONTRIBUTIONS. The board of directors from time to time may authorize contributions to be made by the corporation in such amounts as it may determine to be reasonable to corporations, trusts, funds or foundations organized and operated exclusively for charitable, scientific or educational purposes, no part of the net earning of which inures to the private benefit of any stockholder or individual. The board of directors may, by the affirmative vote of a majority of directors then in office, delegate to the Chairman of the Board or the President the authority to make charitable contributions, subject to the

provisions of this Section 8.8 and such additional limitations as the board of directors may determine.

### ARTICLE IX.

SECTION 9.1. AMENDMENT BY STOCKHOLDERS. These By-laws may be amended altered or repealed by the stockholders at any annual or special meeting by vote or a majority of all shares outstanding and entitled to vote, except that where the effect of the amendment would be to reduce any voting requirement otherwise required by law, the Certificate of Incorporation or these By-laws, such amendment shall require the vote that would have been required by such other provision. Notice and a copy of any proposal to amend these By-laws must be included in the notice of meeting of stockholders at which action is taken upon such amendment.

SECTION 9.2. AMENDMENT BY BOARD OF DIRECTORS. These By-laws may be amended or altered by the board of directors at a meeting duly called for the purpose by majority vote of the directors then in office, except that directors shall not amend the By-laws in a manner which:

- (a) changes the stockholder voting requirements for any action;
- (b) alters or abolishes any preferential right or right of redemption applicable to a class or series of stock with shares already outstanding;
- (c) alters the application of the provisions of Articles VII hereof to any act or transaction which occurs prior to the date of such amendment;
- (d) alters the provisions of Article IX hereof; or
- (e) permits the board of directors to take any action which under law, the Certificate of Incorporation, or these By-laws is required to be taken by the stockholders.

Any amendment of these By-laws by the board of directors may be altered or repealed by the stockholders at any annual or special meeting of stockholders.

EXHIBIT 5.1

[BROWN RUDNICK FREED & GESMER LETTERHEAD]

May 4, 1999

Alpha Industries, Inc. 20 Sylvan Road Woburn, MA 01801

RE: Alpha Industries, Inc.
REGISTRATION STATEMENT ON FORM S-3

Ladies and Gentlemen:

We have acted as legal counsel to Alpha Industries, Inc., a Delaware corporation (the "Company"), in connection with the preparation and filing with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Act"), of a Registration Statement on Form S-3 (the "Registration Statement") relating to 3,450,000 shares (the "Shares") of the Company's Common Stock, \$.25 par value ("Common Stock").

Pursuant to the Registration Statement and an underwriting agreement by and between the Company, CIBC World Markets Corp., Prudential Securities Incorporated, and U.S. Bancorp Piper Jaffray Inc. (the "Underwriters"), in substantially the form filed as Exhibit 1.1 to the Registration Statement (the "Underwriting Agreement"), the Company proposes to sell to the Underwriters up to 3,450,000 Shares of Common Stock. This opinion is being rendered in connection with the filing of the Registration Statement.

In connection with this Opinion Letter, we have examined the documents listed on Schedule A attached hereto (collectively, the "Documents").

We have not made any independent review or investigation of orders, judgments, rules or other regulations or decrees by which the Company or any of its property may be bound, and we have not made any independent investigation as to the existence of actions, suits, investigations or proceedings, if any, pending or threatened against the Company.

2 [BROWN RUDNICK FREED & GESMER LOGO]

Alpha Industries, Inc. May 4, 1999 Page 2

With your concurrence, the opinions hereafter expressed, whether or not qualified by language such as "to our knowledge," are based solely upon (1) our review of the Documents and (2) such review of published sources of law as we have deemed necessary.

This firm, in rendering legal opinions, customarily makes certain assumptions which are described in Schedule B hereto. In the course of our representation of the Company in connection with the Registration Statement, nothing has come to our attention which causes us to believe reliance upon any of those assumptions is inappropriate and, with your concurrence, the opinions hereafter expressed are based upon those assumptions. For purposes of those assumptions, the Enumerated Party referred to in Schedule B is the Company.

Our opinions hereafter expressed are limited to the laws of the Commonwealth of Massachusetts, Federal law and the General Corporation Law of the State of Delaware.

We express no legal opinion upon any matter other than as explicitly addressed in numbered paragraph 1 below, and our express opinions therein contained shall not be interpreted to be implied opinions upon any other matter.

Based upon and subject to the foregoing, we are of the opinion that:

1. The Shares have been duly authorized, and when issued and paid for in accordance with the terms of the Underwriting Agreement, will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement and to the reference to this firm wherever it appears in the Registration Statement.

Very truly yours,

BROWN, RUDNICK, FREED & GESMER

By: Brown, Rudnick, Freed
& Gesmer, P.C., a partner

By: /s/ Steven R. London

Steven R. London, a member duly authorized

#### SCHEDULE A

#### LIST OF DOCUMENTS

In connection with the Opinion Letter to which this Schedule A is attached, we have reviewed the Documents set forth below. However, except as otherwise expressly indicated, we have not reviewed any other documents, instruments or agreements referred to in or listed upon any of the following Documents.

- the Restated Certificate of Incorporation of the Company, as certified by the Secretary of State of the State of Delaware, and a certificate of the Secretary of the Company to the effect that there have been no further amendments thereto;
- (ii) a copy of the Amended and Restated By-laws of the Company, certified by the Secretary of the Company as presently being in effect;
- (iii) copies of certain votes of the board of directors of the Company, certified by the Secretary of the Company as presently being in effect;
- (iv) a certificate dated as of a recent date of the Secretary of State of the State of Delaware as to the good standing of the Company;
  - (v) the Registration Statement; and
  - (vi) the Underwriting Agreement.

#### SCHEDULE B

# BROWN, RUDNICK, FREED & GESMER STANDARD ASSUMPTIONS

In rendering legal opinions in third party transactions, Brown, Rudnick, Freed & Gesmer makes certain customary assumptions described below:

- Each natural person executing any of the Documents has sufficient legal capacity to enter into such Documents.
- 2. Each person other than the Enumerated Party has all requisite power and authority and has taken all necessary corporate or other action to enter into the Documents to which it is a party or by which it is bound, to the extent necessary to make the Documents enforceable against it.
- 3. Each person other than the Enumerated Party has complied with all legal requirements pertaining to its status as such status relates to its rights to enforce the Documents against the Enumerated Party.
- Each Document is accurate, complete and authentic, each original is authentic, each copy conforms to an authentic original and all signatures are genuine.
- All official public records are accurate, complete and properly indexed and filed.

1 Exhibit 23.2

#### CONSENT OF INDEPENDENT AUDITORS

The Board of Directors and Stockholders Alpha Industries, Inc.

The audits referred to in our report dated April 30, 1999, included the related financial statement schedule as of March 28, 1999, and for each of the years in the three-year period ended March 28, 1999, included in the registration statement. This financial statement schedule is the responsibility of the Company's management. Our responsibility is to express an opinion on this financial statement schedule based on our audits. In our opinion, such financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We consent to the use of our reports included herein and incorporated herein by reference and to the references to our firm under the headings "Selected Consolidated Financial Data" and "Experts" in the prospectus.

/s/ KPMG Peat Marwick LLP

Boston, Massachusetts May 4, 1999 1,000 U.S. DOLLARS

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YEAR

MAR-28-1999

MAR-30-1998

MAR-28-1999

1

14,029

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741

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(1,265)

21,490

0

21,490

1.36

1.31
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REPRESENTS AN INCOME TAX BENEFIT