AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON OCTOBER 31, 1995 REGISTRATION NO. 33-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 I.D. NUMBER)

20 SYLVAN ROAD, WOBURN, MASSACHUSETTS 01801 (617) 935-5150 (ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF REGISTRANT'S PRINCIPAL EXECUTIVE OFFICES)

MARTIN J. REID, PRESIDENT ALPHA INDUSTRIES, INC. 20 SYLVAN ROAD, WOBURN, MASSACHUSETTS 01801 (617) 935-5150 (NAME, ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING AREA CODE, OF AGENT FOR SERVICE)

COPIES OF ALL COMMUNICATIONS TO:

STEVEN R. LONDON, ESQUIRE

BROWN, RUDNICK, FREED & GESMER
ONE FINANCIAL CENTER

BOSTON, MASSACHUSETTS 02111

ADAM SONNENSCHEIN, ESQUIRE
FOLEY, HOAG & ELIOT
ONE POST OFFICE SQUARE
BOSTON, MASSACHUSETTS 02109 (617) 330-9000

(617) 832-1000

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

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

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, please 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, please 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, please check the following box. [X]

CALCULATION OF REGISTRATION FEE

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	AMOUNT TO BE REGISTERED	PROPOSED MAXIMUM OFFERING PRICE PER SHARE(1)	PROPOSED MAXIMUM AGGREGATE OFFERING PRICE(1)	AMOUNT OF REGISTRATION FEE
Common Stock, \$.25 par value	2,300,000(2)	\$15.50	\$35,650,000	\$12,294
Rights to Purchase Common Stock(3)	2,300,000(2)	\$0	\$0	\$0

- (1) 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 American Stock Exchange on October 25, 1995.
- (2) Includes up to 300,000 shares of Common Stock which may be purchased by the Underwriters to cover over-allotments, if any.
- (3) Pursuant to a Rights Agreement entered into in 1986, as amended, one right (each a "Right") is deemed to be delivered with each share of Common Stock issued by the Company. The Rights currently are not separately transferable apart from the Common Stock, nor are they exercisable until the occurrence of certain events. Accordingly, no independent value has been attributed to the Rights.

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 STATEMENT 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.

SUBJECT TO COMPLETION, DATED OCTOBER 31, 1995

2,000,000 SHARES

[LOGO OF ALPHA APPEARS HERE]

COMMON STOCK

All of the shares of Common Stock offered hereby are being sold by Alpha Industries, Inc. (the "Company"). The Company's Common Stock is traded on the American Stock Exchange under the symbol AHA. On October 30, 1995, the last reported sale price of the Common Stock as reported on the American Stock Exchange was \$15.50 per share. See "Price Range of Common Stock."

Pursuant to a Rights Agreement entered into in 1986, as amended, one right (each a "Right") is deemed to be delivered with each share of Common Stock offered and sold hereby. The Rights currently are not separately transferable apart from the Common Stock, nor are they exercisable until the occurrence of certain events. See "Description of Capital Stock and Other Matters--Rights Distribution."

SEE "RISK FACTORS" COMMENCING ON PAGE 7 FOR A DISCUSSION OF CERTAIN FACTORS THAT SHOULD BE CONSIDERED BY PROSPECTIVE PURCHASERS OF THE COMMON STOCK OFFERED HEREBY.

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

Price to Underwriting Proceeds to
Public Discount(1) Company(2)

- (1) See "Underwriting" for information concerning indemnification of the Underwriters and other matters.
- (2) Before deducting expenses payable by the Company estimated at \$450,000.
- (3) The Company has granted the Underwriters a 30-day option to purchase up to 300,000 additional shares of Common Stock solely to cover over-allotments, if any. If the Underwriters exercise this option in full, the Price to Public will total \$, the Underwriting Discount will total \$ and the Proceeds to Company will total \$. See "Underwriting."

The shares of Common Stock are offered by the Underwriters named herein, subject to receipt and acceptance by them and subject to their right to reject any order in whole or in part. It is expected that delivery of the certificates representing such shares will be made against payment therefor at the office of Montgomery Securities on or about , 1995.

Oppenheimer & Co., Inc.

Adams, Harkness & Hill, Inc.

, 1995

DESCRIPTION OF GRAPHIC MATERIAL

There are three sets of photographs:

- 1. One photograph running the length of the left side of the page shows a number of the Company's products.
- 2. A group of three photographs illustrates the use of cellular telephones and the radio link for the cellular wireless infrastructure.
- 3. The last set of photographs depicts a variety of wireless communications devises, including a cellular telephone, pager, wireless fax, direct broadcast satellite, wireless cable TV and global positioning system receiver. There are also three diagrams showing satellites and a radio link for some of these applications.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVER-ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE COMMON STOCK AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH TRANSACTIONS MAY BE EFFECTED ON THE AMERICAN STOCK EXCHANGE OR OTHERWISE. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

AVAILABLE INFORMATION

The Company is subject to the informational requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and in accordance therewith files reports, proxy statements and other information with the Securities and Exchange Commission (the "Commission"). Such reports, proxy statements and other information filed by the Company can be inspected and copied at the public reference facilities maintained by the Commission at 450 Fifth Street, N.W., Room 1024, Judiciary Plaza, Washington, D.C. 20549, and at the Commission's Regional Offices at 500 West Madison Street, Suite 1400, Chicago, Illinois 60661 and 7 World Trade Center, Suite 1300, New York, New York 10048. Copies of such material can be obtained from the Public Reference Section of the Commission at 450 Fifth Street, NW, Room 1024, Judiciary Plaza, Washington, D.C. 20549, at prescribed rates. The Company's Common Stock is listed on the American Stock Exchange. Reports, proxy statements and other information concerning the Company can also be inspected at the offices of the American Stock Exchange, 20 Broad Street, New York, New York 10005.

Additional information regarding the Company and the shares offered hereby is contained in the Registration Statement on Form S-3 and the exhibits thereto filed with the Commission under the Securities Act of 1933, as amended (the "Securities Act"). For further information pertaining to the Company and the shares, reference is made to the Registration Statement and the exhibits thereto, which may be inspected without charge at, and copies thereof may be obtained at prescribed rates from, the office of the Commission at 450 Fifth Street, N.W., Washington, D.C. 20549.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The following documents heretofore filed by the Company with the Commission (File No. 1-5560) pursuant to the Exchange Act are incorporated herein by reference: (1) the Company's Annual Report on Form 10-K for the fiscal year ended April 2, 1995; (2) the Company's Quarterly Report on Form 10-Q for the quarter ended July 2, 1995; (3) the Company's Quarterly Report on Form 10-Q for the quarter ended October 1, 1995; and (4) the Company's Definitive Proxy Statement dated August 2, 1995 used in connection with the Annual Meeting of Stockholders held September 11, 1995.

All reports and other documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this Prospectus and prior to the termination of the offering of the Common Stock hereunder shall be deemed to be incorporated by reference herein and to be a part hereof from the date of the filing of such reports and documents. The Company hereby undertakes to provide without charge to each person, including any beneficial owner, to whom a copy of this Prospectus is delivered, upon written or oral request of such person, a copy of any or all of the foregoing documents incorporated herein by reference (exclusive of exhibits, unless such exhibits are specifically incorporated by reference into such documents). Requests for such documents should be submitted in writing to the Corporate Secretary at the corporate headquarters of the Company at 20 Sylvan Road, Woburn, MA 01801 or by telephone at (617) 935-5150.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Prospectus to the extent that a statement contained herein, or in any other subsequently filed document that also is (or is deemed to be) incorporated by reference herein, modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of the Registration Statement or this Prospectus.

PROSPECTUS SUMMARY

The following summary should be read in conjunction with, and is qualified in its entirety by, the more detailed information, including "Risk Factors," appearing elsewhere in this Prospectus and the other information incorporated by reference herein. Except as otherwise indicated, all information contained in this Prospectus assumes that the Underwriters' over-allotment option is not exercised. References to "Common Stock" include "Rights" issuable pursuant to that certain Rights Agreement, entered into in 1986, as amended, providing for the delivery of a Right, along with each share of Common Stock issued by the Company. The Company's fiscal year ends on the Sunday closest to March 31, and the first, second and third fiscal quarters end on the Sunday closest to June 30, September 30 and December 31, respectively. For convenience, the Company has indicated in this Prospectus that its fiscal years end on March 31, and that its fiscal quarters end on June 30, September 30 and December 31. References to fiscal 1991, fiscal 1992, fiscal 1993, fiscal 1994, fiscal 1995 and fiscal 1996 shall indicate the fiscal years ended March 31, 1991, March 29, 1992, March 28, 1993, April 3, 1994, April 2, 1995 and March 31, 1996, respectively.

THE COMPANY

Alpha Industries, Inc. (the "Company") designs and manufactures a broad range of radio frequency ("RF"), microwave frequency and millimeter wave frequency monolithic integrated circuits ("MMICs"), ceramic products, discrete semiconductors, and microwave and millimeter wave components and subsystems for wireless communications applications. These applications include cellular telephones, worldwide personal communications services and personal communications networks ("PCS/PCN"), pagers, specialized mobile radio, wireless data services and global positioning systems ("GPS"). The Company utilizes proprietary gallium arsenide ("GaAs"), ceramic and silicon process technologies to address the needs of wireless communications original equipment manufacturers ("OEMs") for smaller, less expensive and more power efficient products.

The wireless communications industry has grown significantly over the past decade and worldwide demand for wireless communications products continues to grow. Increased acceptance of existing applications and the emergence of new applications, including PCS/PCN, direct broadcast satellite television ("DBS TV"), wireless cable TV and intelligent automobile cruise control and collision avoidance systems ("automotive collision avoidance systems"), have led to increased communication traffic and congestion of the historically assigned frequency bands. In addition, many new and existing wireless applications, such as GPS, DBS TV and automotive collision avoidance systems require the use of higher microwave and millimeter wave frequencies to operate effectively. As a consequence of all of the foregoing factors, wireless communications are moving from lower RF to higher microwave and millimeter wave frequencies where greater bandwidths are available.

The Company offers a broad array of complementary products in GaAs, ceramic and silicon that address a wide portion of the wireless communications frequency spectrum, including RF, microwave and millimeter wave. This enables the Company to offer an increasing portion of the "footprint" in the wireless communications handheld and infrastructure equipment, and gives wireless OEMs the opportunity to satisfy an increasing percentage of their component needs from the Company.

The Company gained extensive experience in the design and manufacture of GaAs MMICs, discrete semiconductors, ceramic products and components and subsystems for millimeter wave frequencies in military applications. These applications accounted for approximately 19% of the Company's new orders in the first six months of fiscal 1996. Over the past several years, the Company has refocused this knowledge and experience on the wireless communications commercial markets. As a result, the Company believes that it is well-positioned as higher frequencies are increasingly used in emerging wireless technologies such as PCS/PCN infrastructure equipment, wireless cable TV and automotive collision avoidance systems.

The Company focuses its sales and marketing efforts on the major OEMs in the wireless communications industry, such as Motorola, Nokia, Ericsson and AT&T, and their suppliers, with the objective of securing orders

for high volume, application specific products. With available capacity at its GaAs fabrication facility, the Company believes that large volume product orders offer opportunities for economies of scale and improved margins. By maintaining close relationships with customers and by integrating its design and manufacturing capabilities, the Company can better anticipate its customers' needs and rapidly develop customer specific solutions based upon the Company's core technologies. The Company believes that this approach enhances the likelihood that the Company's products will be included in its customers' designs for new wireless communications products.

The Company is a Delaware corporation which was organized in 1962. Unless otherwise indicated, the term "Company," as used in this Prospectus, refers to Alpha Industries, Inc., and its subsidiaries. The Company's principal offices are located at 20 Sylvan Road, Woburn, Massachusetts 01801, and its telephone number is (617) 935-5150.

THE OFFERING

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⁽¹⁾ Based on the number of shares of Common Stock outstanding as of September 30, 1995. Excludes (i) 849,222 shares of Common Stock issuable upon exercise of options outstanding under the Company's stock plans at September 30, 1995, at a weighted average exercise price of \$4.31 per share, (ii) 374,261 shares of Common Stock reserved for future issuance under the Company's stock plans and (iii) 50,000 shares of Common Stock issuable upon exercise of a warrant outstanding at September 30, 1995, at an exercise price of \$3.75 per share. See "Capitalization."

SUMMARY CONSOLIDATED FINANCIAL DATA (IN THOUSANDS, EXCEPT PER SHARE DATA)

SIX MONTHS ENDED

1993	1994	1995	1994 1995	
\$ (0.40)	\$ (1.53)	\$ 0.36 \$	0.16 \$ 0.27	
7,464	7,502	7,882	7,744 8,196	
		SEPTE	MBER 30, 1995	
	\$ 69,543 (2,057) (2,787) (2,987) \$ (0.40)	1993 1994 	7,464 7,502 7,882	

	ACTUAL	AS ADJUSTED(3)
BALANCE SHEET DATA:		
Working capital	\$11,109	\$27,799
Total assets	52,046	75,161
Short-term debt, including current portion of capital		
lease obligations	6,250	675
Long-term debt and capital lease obligations, less current portion	2,401	2,401
Stockholders' equity		,
Stockhorders equity	30,300	30,990

⁽¹⁾ In fiscal 1994, the Company recorded repositioning expenses of \$5.6 million, related primarily to the consolidation of certain manufacturing facilities in response to a continued decline in defense related business. In the six months ended September 30, 1995, the Company recorded a \$320,000 repositioning credit, attributable to the reversal of certain accruals for estimated carrying costs, as a result of an earlier than expected disposition of the Company's Methuen, Massachusetts facility. See "Management's Discussion and Analysis of Financial Condition and Results of Operations."

⁽²⁾ Net income (loss) per share is computed on the basis of the weighted average shares of Common Stock outstanding plus common equivalent shares arising from the effect of dilutive stock options and warrants, using the Treasury Stock Method.

⁽³⁾ Adjusted to reflect the sale of the 2,000,000 shares of Common Stock offered hereby, at an assumed offering price of \$15.50 per share, after deducting the estimated underwriting discount and related offering expenses and application of the estimated net proceeds therefrom. Assumes repayment in full of the Company's indebtedness at September 30, 1995 (\$5,575,000) under its working capital line of credit and capital expenditures in the amount of \$12.0 million. See "Use of Proceeds" and "Capitalization."

RTSK FACTORS

In evaluating the Company's business, prospective investors should carefully consider the following factors, in addition to the other information set forth in this Prospectus and in the documents incorporated by reference herein.

HISTORY OF OPERATING LOSSES; REPOSITIONING OF COMPANY'S BUSINESS

The Company has incurred net losses in two of its last three fiscal years. During the fiscal year ended March 31, 1994, the Company sustained a net loss of approximately \$11.5 million, of which \$5.6 million was a repositioning charge. This charge related primarily to the consolidation of certain manufacturing operations and workforce reductions in response to a continued decline in defense related business. The Company anticipates that revenues from military sales will continue to decline. There can be no assurance that the Company's effort to reposition itself as a supplier of advanced products to wireless communications markets will be successful. If revenues from commercial wireless customers do not continue to grow, or grow less rapidly than expected, or if in the near term revenues from military sales decline more rapidly than expected, the Company's operating results could be materially and adversely affected.

VARIABILITY OF OPERATING RESULTS

The Company's quarterly and annual results have varied in the past and may vary significantly in the future due to a number of factors, including: cancellation or delay of customer orders; market acceptance of the Company's or its customers' products; variations in manufacturing yields; timing of announcement and introduction of new products by the Company and its competitors; changes in revenue and product mix; competition; changes in manufacturing capacity and variations in the utilization of this capacity; variations in average selling prices; variations in operating expenses; the long sales cycles associated with the Company's customer specific products; the timing and level of product and process development costs; cyclicality of the semiconductor and ceramic industries; the timing and level of nonrecurring engineering revenues and expenses relating to customer specific products; and changes in inventory levels. Any unfavorable changes in these or other factors could have a material adverse effect on the Company's operating results. The Company's expense levels are based, in part, on its expectations as to future revenue, and certain of these expenses, particularly those relating to the Company's capital equipment and manufacturing overhead, are relatively fixed in nature. For example, the Company is investing in GaAs, silicon and ceramic process development technology in anticipation of increased revenues from related markets. As a result of the relatively fixed nature of certain of the Company's expenses, operating results would be disproportionately and adversely affected by a reduction in revenue. The Company expects that its operating results will continue to fluctuate in the future as a result of these and other factors. See "Management's Discussion and Analysis of Financial Condition and Results of Operations."

CUSTOMER CONCENTRATION

Historically, a significant portion of the Company's sales in each fiscal period has been concentrated among a limited number of customers. This trend is accelerating, and in recent periods sales to the Company's major customers as a percentage of total sales have increased. For the first six months of fiscal 1996, the Company's direct sales to Motorola, Inc. ("Motorola"), Nokia OY AB ("Nokia"), L.M. Ericsson Telefonaktiebolaget ("Ericsson") and AT&T Corp. ("AT&T") in the aggregate accounted for approximately 18% of the Company's sales. The Company's direct sales to six other customers believed by the Company to be suppliers to these four OEMs accounted for an additional 8% of the Company's sales during such period. In fiscal 1993, 1994 and 1995, direct sales to these four OEMs and to such six other customers in the aggregate accounted for approximately 7%, 10%, and 17% of sales, respectively. The Company does not generally enter into long-term contracts with its customers, and when it does, the contract is generally terminable for the convenience of the customer. In the event of an early termination or discontinuance of a contract by one of the Company's major customers, it is unlikely that the Company will be able to identify an alternative purchaser for that product. The Company's business, financial condition and operating results have been materially and adversely affected in the past by the

failure of anticipated orders to materialize and by deferrals or cancellations of orders. If the Company were to lose one of these major customers, or if orders by a major customer otherwise were to decrease, the Company's business, financial condition and operating results would be materially and adversely affected. See "Business--The Alpha Strategy," and "--Customers."

DEPENDENCE ON CUSTOMER SPECIFIC PRODUCTS

Most of the Company's products are designed to be incorporated into specific end-user products. In light of short product life cycles in the wireless communications industry, the Company's future success depends upon its ability to select customer specific development projects which will result in sufficient production volume to enable the Company to recover its development costs and realize a profit on the project. There can be no assurance that the Company will be able to select such customer specific projects, or that the Company's products will be designed into such projects. In addition, OEMs require that their suppliers design and manufacture components very quickly. There can be no assurance that the Company will be able to design, manufacture in large volumes and deliver to its customers high quality, reliable products within the required time period. The Company has experienced delays in the production of MMICs, ceramic products and discrete semiconductors under major contracts with major OEM customers. For example, the Company is experiencing delays in the production of ceramic products under a major contract with Motorola. In particular, the Company's ceramic filter has experienced mechanical difficulty on a new manufacturing line at Motorola, which has delayed the production of the filters. As a result, Motorola has deferred production deliveries under this contract. See "Management's Discussion and Analysis of Financial Condition and Results of Operations." There can be no assurance that this problem will be resolved or that similar problems will not recur in the future. Any such problems could have a material and adverse effect on the Company's operating results.

PRODUCT AND PROCESS DEVELOPMENT AND TECHNOLOGICAL CHANGE

The wireless communications industry is characterized by frequent new product introductions, evolving industry standards and rapid changes in product and process technologies. The Company believes that its future success will depend upon its ability to continue to improve its product and process technologies and develop new technologies. The success of the Company's new products is dependent upon many factors, including factors that are outside the Company's control. These factors include: the Company's ability to anticipate market requirements in its product development efforts; market acceptance and continued commercial success of OEM products for which the Company's products have been designed; the ability to adapt to technological changes and to support established and emerging industry standards; successful and timely completion of product development and commercialization; achievement of acceptable wafer fabrication and ceramic process yields and manufacturing yields generally; and the ability to offer new products at competitive prices. No assurance can be given that the Company's product and process development efforts will be successful or that the Company's new products or those of its customers will achieve or sustain market acceptance. For example, during fiscal 1995, one of the Company's major customers discontinued a certain handset in favor of an architecture that excluded a GaAs MMIC designed by the Company for the product. This change resulted in a loss of potential revenue to the Company. In addition, the wireless communications industry is characterized by end-user demands for increased functionality at ever lower prices. To remain competitive, the Company must obtain yield and productivity improvements and cost reductions and must introduce new products which incorporate advanced features and which therefore can be sold at higher average selling prices. To the extent that such cost reductions and new product introductions do not occur in a timely manner or the Company's or its customers' products do not achieve market acceptance, the Company's operating results could be materially and adversely affected. See "Business--Manufacturing," and "--Research and Development.'

MANUFACTURING RISKS: PRODUCT QUALITY, PERFORMANCE AND RELIABILITY

The manufacturing processes for the Company's products, in particular its GaAs MMICs, are highly complex and precise, requiring advanced and costly equipment, and are being modified continually in an effort to improve yields and product performance. The Company expects that its customers will continue to establish

demanding specifications for quality, performance and reliability that must be met by the Company's products. The Company has limited experience in high volume manufacturing of certain GaAs MMICs and ceramic products for the high volume commercial applications on which its current product development, sales and marketing efforts are focused. The Company has encountered and may in the future encounter development and manufacturing delays, has from time to time failed and may in the future fail to meet its customers' contractual specifications, and one or more of its products have contained and may in the future contain undetected defects or failures when first introduced or after commencement of commercial shipments. If such delays, defects or failures occur, the Company could experience lost revenue, resulting from delays in or cancellations or rescheduling of orders or shipments, product returns or discounts, or could experience increased costs, including product or process redesign, warranty expense or costs associated with customer support, any of which could have a material adverse effect on the Company's operating results. There can be no assurance that the Company will not in the future experience significant product quality, performance or reliability problems. See "Business--Manufacturing."

MANAGEMENT OF GROWTH

The growth in the Company's business, and its continuing transition from military to commercial sales, has placed, and is expected to continue to place, a significant strain on the Company's personnel, management and other resources. In order to manage any future growth effectively, the Company will, among other things, be required to upgrade and expand certain manufacturing facilities; attract, train, motivate and manage employees successfully; and continue to improve its operational and financial systems. There can be no assurance that the Company will be successful in these respects. The Company is currently in the process of implementing a new management information system. There can be no assurance that the Company will not encounter problems or increased expense levels in connection with implementing its new management information system. In addition, the Company anticipates that any future growth of its business will require increased utilization of the Company's manufacturing capacity, including increasing the number of shifts during which its manufacturing facilities are operational. Further, any such future growth could require improvement or expansion of the Company's existing manufacturing facilities. The Company's ceramic manufacturing facility is currently running near its installed equipment capacity. Capacity constraints at this facility have caused and continue to cause production delays. Any such delays could have a material adverse effect on the Company's results of operations. As a result, the Company is planning to expand its ceramic manufacturing capacity. See "Use of Proceeds." Expansion or upgrade of the Company's manufacturing facilities will entail substantial capital expenditures. Lead times for certain capital equipment are long, and modification of the Company's facilities and installation of such equipment is a complex process which could disrupt the Company's ongoing manufacturing operations. Delays in completion of a planned expansion or upgrade could limit the ability of the Company to respond to the rapid design and production cycles required by its customers. Moreover, there can be no assurance that the Company will be able to secure sources of capital adequate to fund the necessary expenditures. See "Management's Discussion and Analysis of Financial Condition and Results of Operations -- Financial Condition." The Company could experience product quality, performance or reliability problems and development and manufacturing delays in connection with any such increase in utilization or such expansion or upgrade of the Company's manufacturing capacity. The occurrence of any such problems or the inability of the Company otherwise to manage any future growth effectively could materially and adversely affect the Company's operating results.

ADOPTION OF GAAS COMPONENTS BY OEMS

Silicon semiconductor technologies are the dominant process technologies for certain integrated circuits and these technologies continue to improve in performance. Many of the Company's OEM customers utilize silicon devices and currently are using or evaluating the use of GaAs. To date, certain OEMs have been reluctant to utilize GaAs technologies because of perceived risks relating to GaAs technology, including a lack of experience in designing systems with GaAs products, unfamiliar and more expensive manufacturing processes and uncertainties about the relative cost effectiveness of GaAs products compared to silicon devices. There can be no assurance that GaAs technology will achieve widespread market acceptance. See "Business--The Alpha Strategy," and "--Competition."

The production of GaAs integrated circuits is more costly than the production of silicon devices. This cost differential relates primarily to higher costs of the raw wafer material, lower production yields associated with the relatively immature GaAs technology and higher unit costs associated with lower production volumes. The Company believes its costs of producing GaAs integrated circuits will continue to exceed the costs associated with the production of silicon devices. As a result, the Company must offer devices which provide superior performance to that of silicon for specific applications in order to be competitive with silicon devices. There can be no assurance that the Company can continue to identify markets which require performance superior to that offered by silicon solutions, or that the Company will continue to offer products which provide sufficiently superior performance to offset the cost differential. See "Business--Competition."

ENVIRONMENTAL REGULATIONS

The Company is subject to a variety of federal, state and local laws, rules and regulations related to the use, handling, discharge or disposal of toxic, volatile or other hazardous chemicals used in its manufacturing process and to the presence of hazardous chemicals on properties owned or operated by the Company. The failure to comply with present or future environmental regulations could result in substantial fines being imposed on the Company, suspension of production or a cessation of operations. The Company has been engaged in environmental assessment and remediation activities at its Adamstown, Maryland facility since 1989, due to contamination of groundwater at such facility. In 1989, the Company entered into a consent decree with the State of Maryland Department of the Environment pursuant to which it has until recently operated a groundwater remediation system. Based on groundwater test results, the Company has suspended operation of the remediation system. The Company is continuing to monitor the presence of contaminants in groundwater at its Adamstown facility and is prepared to resume operation of the groundwater remediation system if necessary. In addition, the Company has been notified by federal and state environmental agencies of its potential liability with respect to two Superfund sites, to which small quantities of the Company's hazardous waste were shipped. There can be no assurance that the Company's remediation activities or any liability concerning the Superfund sites will not have a material adverse effect on the Company. However, the Company believes that its volumetric contribution of waste to the two Superfund sites is de minimis and that the extent of its liability with respect to these sites is not likely to be material. The Company could be required to acquire significant equipment, or incur substantial other expenses in order to comply with environmental regulations. Any failure by the Company to comply with applicable law in the use, handling or disposal of hazardous substances or in management of real property could subject the Company to substantial future liabilities.

DEPENDENCE ON KEY PERSONNEL

The Company's future success depends in large part on the continued service of its key technical, marketing and management personnel, and on its ability to identify, attract and retain qualified technical personnel, particularly highly skilled design, process and test engineers involved in the manufacture of existing products and the development of new products and processes. The competition for such personnel is intense, and the loss of key employees could have a material adverse effect on the Company.

CYCLICALITY OF THE COMPANY'S MARKETS

While the semiconductor and ceramic markets have in the past experienced overall growth, they have historically been characterized by wide fluctuations in product supply and demand. From time to time, these industries have also experienced significant downturns, often in connection with, or in anticipation of, maturing product cycles and declines in general economic conditions. These downturns have been characterized by diminished product demand, production overcapacity and subsequent accelerated price erosion, and in some cases have lasted for extended periods of time. The Company's business may in the future be materially and adversely affected by industry-wide fluctuations. The Company's continued success will depend in large part on the continued growth of the wireless communications industry. Certain of the Company's major OEM customers have recently announced a softening of demand for certain of their cellular products. No assurance can be given that the Company will not be adversely affected in the future by cyclical conditions in the wireless communications industry.

LIMITED SOURCES OF MATERIALS AND SERVICES

The Company currently procures certain components and services for its products from single or limited sources. For example, the Company currently procures GaAs substrates, a critical raw material, from only two sources. In addition, excluding the GaAs wafers it produces internally, the Company outsources the fabrication of GaAs wafers to a single external foundry. Further, the Company currently procures silicon substrates for semiconductors and certain chemical powders for ceramic manufacturing from single sources. The Company purchases these materials and services on a purchase order basis, does not carry significant inventories and does not have any long-term supply contracts with its source vendors. The inability of the Company to obtain these materials in required quantities would result in significant delays or reductions in product shipments, which would materially and adversely affect the Company's operating results. The Company from time to time experiences delays in receiving products from certain of its vendors, and no assurance can be given that similar problems will not recur. If the Company were to change certain of its vendors, the Company would be required to requalify the components supplied by such vendors. Requalification could prevent or delay product shipments, which would materially and adversely affect the Company's operating results. Additionally, prices could increase significantly in connection with changes of vendors. The Company's reliance on single and limited sources involves several additional risks, including reduced control over the price, timely delivery, reliability and quality of the components. Any inability of the Company to obtain timely deliveries of materials of acceptable quality, or a significant increase in the prices of materials, could materially and adversely affect the Company's operating results.

DEPENDENCE ON ASSEMBLY SUBCONTRACTORS

The Company uses assembly subcontractors located outside the United States to package and wirebond certain large volume orders of integrated circuits. The Company attempts to maintain more than one qualified service supplier for each assembly process, but has been unable at times to achieve this goal because of minimum volume requirements, service quality issues or other factors. The Company has, from time to time, experienced problems procuring assembly services, and no assurance can be given that similar problems will not recur. For example, in the first quarter of fiscal 1996, a major foreign subcontractor discontinued operations without notice, resulting in procurement difficulties, increased costs and product shipment delays. The Company's inability to obtain sufficient high quality and timely assembly service, or the loss of any of its current assembly vendors, would result in delays or reductions in product shipment, and/or reduced product yields, any of which would materially and adversely affect the Company's operating results. See "Business--Manufacturing."

COMPETITION

Wireless communications markets are intensely competitive and are characterized by rapid technological change, rapid product obsolescence and price erosion. Currently, the Company competes primarily with manufacturers of high performance GaAs MMICs, discrete silicon semiconductors, ceramic filters and other ceramic products and microwave and millimeter wave components and subsystems. The Company expects increased competition both from existing competitors and others which may enter these markets, as well as potential future competition from companies which may offer new or emerging technologies, such as surface acoustic wave filters, silicon germanium and other silicon technologies. In addition, many of the Company's customers, particularly its largest customers, have or could acquire the capability to develop or manufacture products competitive with those that have been or may be developed or manufactured by the Company. The Company's future operating results may depend in part upon the extent to which these customers elect to purchase from outside sources rather than develop and manufacture their own systems. A number of the Company's competitors have significantly greater financial, technical, manufacturing and marketing resources than the Company. The ability of the Company to compete successfully depends in part upon the ability of the Company to develop price competitive, high quality solutions for OEMs and the extent to which customers select the Company's products over competitors' products for their systems. There can be no assurance that the Company will be able to compete successfully in the future. See "Business--Competition."

GOVERNMENT CONTRACTS

Although the Company has reduced its dependence upon sales to the United States and foreign governments, a significant portion of the Company's revenues continue to be derived from such sales. Approximately 49%, 40%, 29% and 19% of the Company's new orders were derived from United States and foreign military and defense related sources in fiscal 1993, 1994 and 1995, and for the first six months of fiscal 1996, respectively. Significant reductions or delays in procurements of the Company's products by the United States or any foreign government would have a material adverse effect on the Company's operating results. Generally, the United States Government and its contractors and subcontractors may terminate their contracts with the Company for cause or for convenience, upon certain terms and conditions. The Company has in the past experienced termination of government contracts. There can be no assurance that termination of contracts will not occur in the future. Termination of government contracts or subcontracts having a significant dollar value would have a material adverse effect on the Company's operating results.

GOVERNMENTAL REGULATION OF COMMUNICATIONS INDUSTRY

The wireless communications industry is heavily regulated. The sale of equipment by OEMs who purchase the Company's products may be materially and adversely affected by governmental regulatory policies, the imposition of common carrier tariffs or taxation of telecommunications services. The delays inherent in the governmental approval process may in the future cause the cancellation, postponement or rescheduling of the installation of wireless communications systems. These delays may have a material adverse effect on the Company's operating results.

DIFFICULTY IN PROTECTING INTELLECTUAL PROPERTY

The Company's ability to compete is affected by its ability to protect its proprietary information. The Company relies primarily on trade secret laws, confidentiality procedures and licensing arrangements to protect its intellectual property rights. In addition, where appropriate, the Company seeks patent protection. The Company currently has patents granted and pending in the United States, and intends to seek further patents on its technology. There can be no assurance that patents will issue from any of the Company's pending or any future applications or that any claims allowed from such applications will be of sufficient scope or strength, or be issued in all countries where the Company's products can be sold, to provide meaningful protection or any commercial advantage to the Company. Also, competitors of the Company may be able to design around the Company's patents. The laws of certain foreign countries in which the Company's products are or may be developed, manufactured or sold may not protect the Company's products or intellectual property rights to the same extent as do the laws of the United States and thus make the possibility of piracy of the Company's technology and products more likely. Although the Company intends to defend its intellectual property, there can be no assurance that the steps taken by the Company to protect its proprietary information will be adequate to prevent misappropriation of its technology or that the Company's competitors will not independently develop technologies that are substantially equivalent or superior to the Company's technology.

INTELLECTUAL PROPERTY CLAIMS

The semiconductor industry is characterized by vigorous protection and pursuit of intellectual property rights, which has resulted in significant and often protracted and expensive litigation. Although there is currently no pending intellectual property litigation against the Company, the Company from time to time is notified of claims that the Company may be infringing patents or other intellectual property rights owned by third parties. A former customer of the Company has notified the Company that the customer believes that a patent held by the customer, and a related agreement between the customer and the Company, preclude the Company from manufacturing for others, components for low power point-to-multi-point multi-function cellular television systems operating at certain millimeter wave frequencies without a license from, and the consent of, the customer. The Company, after consultation with counsel, believes that the patent in question is invalid. However, the invalidity of any patent must be determined by a court, and there can be no assurance that a court would find such patent invalid. The Company does not believe that its agreement with the customer, if enforceable, would

have a material adverse effect on the Company's future results of operations. If it is necessary or desirable, the Company may seek licenses under patents or other intellectual property rights asserted by others, or may attempt to develop non-infringing technology. However, there can be no assurance that licenses will be offered or that the terms of any offered licenses will be acceptable to the Company, or that the Company will be successful in developing non-infringing technology. The failure to obtain a license from a third party for technology used by the Company could cause the Company to incur substantial liabilities and to suspend the manufacture of products. Furthermore, the Company may initiate claims or litigation against third parties for infringement of the Company's proprietary rights, or to establish the validity of the Company's proprietary rights. Litigation by or against the Company could result in significant expense to the Company and divert the efforts of the Company's technical and management personnel, whether or not such litigation results in a favorable determination for the Company. In the event of an adverse result in any such litigation, the Company could be required to pay substantial damages, cease the manufacture, use and sale of infringing products, expend significant resources to develop non-infringing technology, discontinue the use of certain processes or obtain licenses to the infringing technology. There can be no assurance that the Company would be successful in such development or that such licenses would be available on reasonable terms, and any such development or license could require expenditures by the Company of substantial time and other resources. In the event that any third party makes a successful claim against the Company or its customers, and a license is not made available to the Company on commercially reasonable terms, the Company's business, financial condition and operating results would be adversely affected. See "Business--Intellectual Property."

RISKS OF INTERNATIONAL SALES

Sales outside of the United States were approximately \$18.6 million, \$22.8 million, \$23.3 million and \$15.4 million in fiscal 1993, 1994 and 1995, and for the six months ended September 30, 1995, respectively. International sales involve a number of inherent risks, including imposition of government controls, currency exchange fluctuations, potential insolvency of international distributors and representatives, reduced protection for intellectual property rights in some countries, the impact of recessionary environments in economies outside the United States, political instability and generally longer receivables collection periods, as well as tariffs and other trade barriers. In addition, due to the technological advantage provided by GaAs in many military applications, a substantial portion of the Company's 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 to date the Company has experienced no difficulty in obtaining these licenses, failure to obtain such licenses in the future could have a material adverse effect on the Company's operating results. Furthermore, because most of the Company's foreign sales are denominated in United States dollars, the Company's products become less price competitive in countries whose currencies decline in value against the dollar. There can be no assurance that these factors will not have an adverse effect on the Company's future international sales and, consequently, on the Company's business, operating results and financial condition. See "Business--Sales and Marketing.'

IMPEDIMENTS TO CHANGES IN CONTROL

The Company's Restated Certificate of Incorporation and Amended and Restated Bylaws include certain provisions that may have the effect of discouraging or preventing a change in control of the Company. In addition, the Company made a rights distribution in November, 1986 that could also have the effect of discouraging or preventing a change in control of the Company. These provisions could limit the price that stockholders of the Company might receive in the future for shares of the Common Stock. See "Description of Capital Stock and Other Matters."

POTENTIAL VOLATILITY OF STOCK PRICE

The market price of the shares of Common Stock has recently been and is likely to continue to be highly volatile and materially affected by factors such as fluctuations in the Company's operating results, announcements of technological innovations or new products by the Company or its competitors, governmental regulatory action, developments with respect to patents or proprietary rights, general market conditions and other

factors. In addition, the stock market has from time to time experienced significant price and volume fluctuations that are unrelated to the operating performance of particular companies. In the event that in some future quarter the Company's net sales or operating results were to be below the expectations of public market securities analysts and investors, the price of the Company's Common Stock could be materially and adversely affected. See "Price Range of Common Stock."

SHARES ELIGIBLE FOR FUTURE SALE

Upon completion of this offering, the Company will have 9,808,722 shares of Common Stock outstanding (10,108,722 shares if the Underwriters' overallotment option is exercised in full), of which 8,165,960 shares of Common Stock (8,465,960 shares if the Underwriters' over-allotment option is exercised in full) will be freely tradable without restriction or further registration under the Securities Act of 1933, as amended (the "Securities Act"), by persons other than "affiliates" of the Company. The remaining 1,642,762 shares of Common Stock held by stockholders who may be deemed to be "affiliates" of the Company under Rule 144 of the Securities Act, may only be resold pursuant to a registration statement under the Securities Act or an exemption from such registration, including exemptions provided by Rule 144 thereunder. All of the Company's officers and directors, holding an aggregate of 497,692 shares of Common Stock (including 396,400 shares of Common Stock issuable under stock options that are or will become vested as of 90 days from the date of this Prospectus), have agreed that they will not, without the prior written consent of Montgomery Securities, on behalf of the Underwriters, directly or indirectly, offer, sell, contract to sell, make any short sale, pledge, establish a "put equivalent position" within the meaning of Rule 16a-1(h) under the Exchange Act, or otherwise dispose of any shares of Common Stock, options to acquire shares of Common Stock or any securities convertible or exchangeable for shares of Common Stock, or publicly announce the intention to do any of the foregoing, for a period of 90 days from the date of this Prospectus, subject to certain exceptions. In addition, the Company has agreed in the Underwriting Agreement that, without the prior written consent of Montgomery Securities, on behalf of the Underwriters, it will not issue, offer, sell or grant shares of Common Stock or options to purchase such shares (other than options or shares granted or issued pursuant to the Company's 1986 Long-Term Incentive Plan, Savings and Retirement Plan, 1994 Non-Qualified Stock Option Plan for Non-Employee Directors, Employee Stock Purchase Plan and an outstanding warrant to purchase 50,000 shares of Common Stock) or otherwise dispose of the Company's equity securities, or any other securities convertible into or exchangeable for the Company's Common Stock or other equity securities, for a period of 90 days after the first date that any shares of Common Stock are released for sale in this offering. See "Underwriting." Immediately following this offering, the Company will have outstanding options to purchase an aggregate of 849,222 shares of Common Stock, of which options to purchase an aggregate of 501,527 shares of Common Stock are currently exercisable. Outstanding options to purchase an aggregate of approximately 25,835 additional shares of Common Stock will become exercisable within six months of the date of this Prospectus. In addition, the Company has reserved an aggregate of 374,261 shares of Common Stock for issuance pursuant to the Company's stock plans. All of the shares issuable pursuant to the Company's stock plans are registered under the Securities Act on Registration Statements on Form S-8. Shares issued to nonaffiliates upon the exercise of options generally will be freely tradable without restriction or further registration under the Securities Act. Sales of substantial amounts of Common Stock in the public market following this offering could have a material adverse effect on prevailing market prices for the Common Stock.

USE OF PROCEEDS

The net proceeds to the Company from the sale of the 2,000,000 shares of Common Stock offered by the Company hereby are estimated to be \$28,690,000 (\$33,061,000 if the Underwriters' over-allotment option is exercised in full), assuming a public offering price of \$15.50 per share, after deduction of the estimated underwriting discount and estimated offering expenses payable by the Company.

The Company expects to use the net proceeds for repayment of indebtedness and capital expenditures, and the balance for working capital, potential acquisitions and general corporate purposes. The indebtedness to be repaid consists of all or a portion of the Company's bank working capital line of credit, currently at \$5.4 million as of October 25, 1995. Planned capital expenditures consist of approximately \$12 million over the next 12 months, primarily for the expansion of the Company's ceramic manufacturing capacity in Maryland and for

capital equipment for use in its GaAs MMIC fabrication facility, all or a portion of which expenditures are expected to be funded from the net proceeds of this offering.

The Company's bank indebtedness consists of a \$6.5 million working capital line of credit and a \$5.0 million equipment line of credit. These lines of credit are secured by security interests in substantially all of the Company's assets, excluding real property. The expiration dates for the working capital and equipment lines of credit are August 1, 1997 and July 31, 1996, respectively. The maturity date for loans under the working capital line of credit is August 1, 1997 and the maturity date for loans under the equipment line of credit is August 1, 1999. Advances under both lines of credit bear interest at a fluctuating rate equal to the prime rate or, at the Company's option, LIBOR plus 200 basis points. As of October 25, 1995, the amounts drawn under the working capital line of credit and the equipment line of credit were \$5.4 million and \$1.0 million, respectively.

With respect to potential acquisitions, the Company may use a portion of the net proceeds to acquire businesses, products or technologies complementary to the Company's current business, although it has no such commitments, and no such acquisitions are currently being negotiated or planned. The specific timing and amount of funds required for specific uses by the Company cannot be precisely determined at this time. Pending such uses, the Company intends to invest in short-term, investment grade, interest-bearing obligations.

DIVIDEND POLICY

The Company has not paid cash dividends on its Common Stock since fiscal 1986, and the Company does not anticipate paying cash dividends in the foreseeable future. Any future determination to pay cash dividends will be at the discretion of the Board of Directors and will be dependent upon the Company's financial condition, operating results, capital requirements, general business conditions and such other factors as the Board of Directors deems relevant. The Company is subject to financial and operating covenants, including a prohibition against the payment of cash dividends, under its bank financing agreements.

PRICE RANGE OF COMMON STOCK

The Company's Common Stock is traded on the American Stock Exchange under the symbol AHA. The following table sets forth, for the periods indicated, the high and low sale prices for the Common Stock, as reported on the American Stock Exchange.

			LOW
FISCAL 1994:			
First Quarter	\$ 3	5/8	
Second Quarter Third Quarter	6 6	3/8	3 4
Fourth Quarter	•	9/16	3 1/8
FISCAL 1995: First Quarter	1	1/2	3
Second Quarter		7/8	3 7/8
Third Quarter	-	3/8 5/8	5 1/4
Fourth Quarter FISCAL 1996:	TT	5/8	6 3/8
First Quarter		1/4	10 5/8
Second Quarter Third Quarter (through October 25, 1995)		5/8 7/8	14 1/8 13 3/4

The last reported sale price of the Common Stock on the American Stock Exchange on October 30, 1995 was \$15.50 per share.

CAPITALIZATION

The following table sets forth the actual capitalization of the Company as of September 30, 1995 and as adjusted to reflect the sale by the Company of the 2,000,000 shares of Common Stock offered hereby at an assumed public offering price of \$15.50 per share, after deducting the estimated underwriting discount and related offering expenses and application of the estimated net proceeds thereof as if such transactions were consummated on September 30, 1995.

	ACTUAL	ER 30, 1995 AS ADJUSTED
		HOUSANDS)
Notes payable, bank (1)	\$ 5,575	\$ -
obligations	675 =====	
Long-term debt, less current portion		1,617 784
30,000,000 shares; issued 8,054,774 shares, actual and 10,054,774 shares, as adjusted (2)	28,335	2,514 56,525 457
LessTreasury shares 246,052 shares at cost		59,496 311
Total stockholders' equity	\$30,300	•
Total capitalization		
	======	======

⁽¹⁾ At October 25, 1995, the outstanding balance was \$5.4 million.

⁽²⁾ Excludes (i) 849,222 shares of Common Stock issuable upon exercise of stock options outstanding at September 30, 1995, at a weighted average exercise price of \$4.31 per share, (ii) 133,825 shares of Common Stock reserved for issuance pursuant to the Company's Employee Stock Purchase Plan, (iii) 205,436 shares of Common Stock reserved for issuance pursuant to the Company's 1986 Long-Term Incentive Plan, (iv) 35,000 shares of Common Stock reserved for issuance pursuant to the Company's 1994 Non-Qualified Stock Option Plan For Non-Employee Directors, and (v) 50,000 shares of Common Stock issuable upon exercise of a warrant outstanding at September 30, 1995, at an exercise price of \$3.75 per share.

SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data of the Company for fiscal 1991 through fiscal 1995 have been derived from the consolidated financial statements of the Company, which have been audited by KPMG Peat Marwick LLP. The selected consolidated financial data for the six months ended September 30, 1994 and 1995 are derived from unaudited financial statements. Selected Consolidated Financial Data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations," included elsewhere in this Prospectus. Unaudited data for the six months ended September 30, 1994 and 1995 include, in the opinion of management, all adjustments (consisting only of normal, recurring accruals) necessary to state fairly the information set forth therein. Operations for the six months ended September 30, 1995 are not necessarily indicative of the results that may be expected for the fiscal year ending March 31, 1996.

	FISCAL YEAR ENDED MARCH 31,				SIX MONTHS ENDED SEPTEMBER 30,		
	1991	1992	1993	1994	1995	1994	1995
			OUSANDS,	EXCEPT PER			
INCOME STATEMENT DATA: Sales	\$66,344	\$71,032	\$69,543	\$ 70,147			\$ 46,167
Costs and expenses: Cost of sales Research and	44,127	51,055	52,404	55,395	54,376	25,913	30,888
development	2,825	3,873	2,915	3,429	4,154	1,798	3,915
Selling and administrative Repositioning expenses	16,484	16,074	16,281	16,281	15,727	7,337	8,737
(credit)(1)	-	-	-	5,639	-	-	(320)
Total costs and expenses	63,436		71,600				43,220
Operating income (loss)							2,947
Other income (expense), net	(659)			(599)			
Income (loss) before income taxes	2,249		(2,787)			1,556	
taxes	943	78	200	270		294	
Income (loss) before extraordinary item Extraordinary item utilization of net operating loss	1,306	113	(2,987)				
carryforward			-	-	-	-	-
Net income (loss)	\$ 1,810	\$ 122	\$(2,987)		\$ 2,847	\$ 1,262	\$ 2,195
Per share data: Income (loss) before extraordinary item Extraordinary item	\$ 0.18 0.07	\$ 0.02	\$ (0.40)	\$ (1.53)	\$ 0.36	\$ 0.16	
Net income (loss) per share	\$ 0.25	\$ 0.02		\$ (1.53)	\$ 0.36		
Weighted average common shares and common share equivalents	7,246	7,429	7,464	7,502	7,882	7 ,744	8,196
		M	ARCH 31,	======		SEPTEMB	
	1991			1994	1995	 199	
			(IN	THOUSANDS			

BALANCE SHEET DATA:						
Working capital	\$14,454	\$17,800	\$15,767	\$ 8,981	\$10,983	\$11,109
Total assets	57,071	53,211	53,777	44,430	50,167	52,046
Long-term debt,						
including current						
portion	5,664	5,349	5,422	5,180	5,083	1,884
Other long-term						
liabilities	434	350	465	395	794	886
Capital lease						
obligations, including						
current portion	-	-	1,265	1,263	1,124	1,192
Stockholders' equity	38,233	38,456	35,565	24,261	27,674	30,300

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⁽¹⁾ In fiscal 1994, the Company recorded repositioning expenses of \$5.6 million, related primarily to the consolidation of certain manufacturing facilities in response to a continued decline in defense related business. In the six months ended September 30, 1995, the Company recorded a \$320,000 repositioning credit, attributable to the reversal of certain accruals for estimated carrying costs, as a result of an earlier than expected disposition of the Company's Methuen, Massachusetts facility.

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

OVERVIEW

Historically, the Company has derived a substantial portion of its revenues from sales to military customers. However, over the past several years, the Company has been reducing its reliance on military business and increasing its emphasis on the commercial wireless market. In fiscal 1993, orders from military customers accounted for approximately 49% of the Company's total orders. Since fiscal 1993, this percentage has declined steadily. Orders from commercial customers have increased in dollar amount, and also have increased as a percentage of the Company's total orders, from 60% in fiscal 1994, to 71% in fiscal 1995 and 81% for the first six months of fiscal 1996.

In fiscal 1994, the Company consolidated certain manufacturing operations, reduced its work force, and took other steps to reduce operating costs relating to its declining military business. As a result, during the fourth quarter of fiscal 1994, the Company took a repositioning charge of \$5.6 million, primarily attributable to severance costs, consolidation costs and a write-down to reduce the carrying value of its Methuen, Massachusetts facility, which had been used primarily to manufacture products for military customers. This repositioning charge contributed to the Company's operating loss of \$10.6 million in fiscal 1994.

The Company's research and development efforts relating to the military market have been funded primarily by its military customers. As the Company has reduced its emphasis on military programs, the amount of the Company's customer-sponsored research and development has diminished. At the same time, Company-sponsored research and development costs have increased, from \$2.9 million in fiscal 1993, to \$3.4 million in fiscal 1994, \$4.2 million in fiscal 1995 and \$3.9 million for the first six months of fiscal 1996, constituting 20%, 25%, 33% and 57% of the Company's total research and development expenditures for such periods, respectively.

Because increases in Company-sponsored research and development have been more than offset by the decline in customer-sponsored expenditures, the Company's total expenditures on research and development have decreased since fiscal 1993, from \$14.6 million in that year, to \$13.8 million in fiscal 1994, \$12.4 million in fiscal 1995 and \$6.8 million in the first six months of fiscal 1996, and have diminished as a percentage of the Company's sales from 21% to 20%, 16% and 15% for such periods, respectively.

Company-sponsored research and development is focused on the development of new and enhanced commercial products and related process technologies. In contrast, customer-sponsored research and development has generally been directed towards objectives defined by the Company's military customers. The Company intends to continue to increase its expenditures on Company-sponsored research and development which the Company believes will be more effective in furthering the Company's strategy than customer-sponsored research and development.

Expenditures on customer-sponsored research and development that are reimbursed by the customer are included both in sales and cost of sales. Company-sponsored research and development is reflected in research and development expense. The Company's gross margins are affected by the mix of Company-sponsored and customer-sponsored research and development, since research and development expenditures reimbursed by the customer are included in cost of sales rather than in research and development expense. The increased reliance by the Company on Company-sponsored research and development and the decline in customer-sponsored research and development have been a factor contributing to increases in the Company's gross margins since fiscal 1994.

RESULTS OF OPERATIONS

The following table sets forth selected consolidated income statement data expressed as a percentage of sales for the periods indicated.

	FISCAL YEAR ENDED MARCH 31,					SIX MONTHS	ER 30,
	1991	1992		1994	1995	1994	1995
Sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
Costs and expenses: Cost of sales Research and develop-	66.5	71.9	75.4	79.0	69.5	70.2	66.9
ment	4.3	5.5	4.2	4.9	5.3	4.9	8.5
tive	24.8	22.6	23.4	23.2	20.1	19.8	18.9
(credit)	-	-	-	8.0	-	-	(0.7)
Total costs and expenses	95.6			115.1	94.9	94.9	93.6
Operating income (loss)							6.4
net	(1.0)	0.3	(1.0)			(0.9)	
Income (loss) before income taxes Provision for income	3.4		(4.0)	(16.0)			5.6
taxes	1.4	0.1	0.3	0.3		0.8	0.8
Income (loss) before ex- traordinary item Extraordinary itemuti-	2.0		(4.3)				4.8
lization of net operat- ing loss carryforward	0.7	-	-	-			-
Net income (loss)				(16.3)% =====			4.8%

SIX MONTHS ENDED SEPTEMBER 30, 1994 AND 1995. Sales for the first six months of fiscal 1996 increased 25.0% to \$46.2 million as compared to sales of \$36.9 million for the first six months of fiscal 1995. This increase was attributable to increased unit sales volumes in the Company's GaAs MMIC, ceramic and silicon discrete semiconductor product lines, primarily into commercial wireless markets, which more than offset declining military sales. Unit sales increases offset flat or declining average selling prices in the Company's markets.

The increase in sales occurred despite the continued delay in volume shipments under a \$20 million contract to supply ceramic filters entered into with Motorola in the third quarter of fiscal 1995. Motorola is working with the Company to resolve a mechanical problem with the filter on a new manufacturing line at Motorola. Orders received by the Company during the first six months of fiscal 1996, which do not include any material amount attributable to the Motorola ceramic filter contract, increased 32.6% compared with the first six months of fiscal 1995. These new orders consisted primarily of ceramic filter and resonator orders from other wireless OEMs as well as orders for GaAs MMICs from wireless OEMs, including Motorola. The Company accordingly does not expect the delay in the commencement of volume production under the Motorola ceramic filter contract to have a material effect on its results of operations.

Gross profit for the first six months of fiscal 1996 increased 38.7% to \$15.3 million or 33.1% of sales, as compared to \$11.0 million or 29.8% of sales, for the comparable period in fiscal 1995. The improvement in gross profit was attributable primarily to higher capacity utilization at the Company's Woburn, Massachusetts manufacturing facility.

Research and development expenses increased 117.7% to \$3.9 million, or 8.5% of sales in the first six months of fiscal 1996 as compared to \$1.8 million or

4.9% of sales during the first six months of fiscal 1995. This increase was primarily attributable to increased investment by the Company in the wireless markets across all of its product lines. The Company will continue to invest in product and process development in order to address the demands of the wireless market.

Selling and administrative expenses increased 19.1% to \$8.7 million, or 18.9% of sales in the first six months of fiscal 1996, as compared to \$7.3 million, or 19.8% of sales for the same period in fiscal 1995. Selling

and administrative expenses increased primarily as a result of training and other costs related to the early phases of implementation of a new manufacturing and management information system, as well as increased commissions related to higher sales volume.

The Company had a \$320,000 repositioning credit during the first half of fiscal 1996, which resulted from the reversal of certain accruals for estimated carrying costs as a result of an earlier than expected disposition of the Methuen, Massachusetts facility.

Other expense increased primarily as a result of interest expense attributable to higher short term borrowings.

The Company's effective tax rate for the first six months of fiscal 1996 was 15.0% compared to the current combined federal, state and foreign rate of approximately 40%. This rate differed from statutory rates primarily as a result of the utilization of net operating loss carryforwards. At September 30, 1995, the Company had available net operating loss carryforwards of approximately \$23 million which expire commencing in 2004.

FISCAL YEARS 1993, 1994 AND 1995. Sales for fiscal 1995 increased 11.6% to \$78.3 million as compared to sales of \$70.1 million in fiscal 1994, which in turn increased slightly over fiscal 1993 sales of \$69.5 million. The increase in fiscal 1995 was attributable to increased unit volumes in the Company's GaAs MMIC, ceramic and silicon discrete semiconductor product lines, primarily into commercial wireless markets, which more than offset declining military sales. Unit increases offset flat or declining average selling prices in the Company's markets.

Gross profit increased 61.9% in fiscal 1995 to \$23.9 million, or 30.5% of sales, as compared to \$14.8 million, or 21.0% of sales in fiscal 1994. Gross profit decreased 13.9% in fiscal 1994 from \$17.1 million, or 24.6% of sales, in fiscal 1993. The increase in gross profit in fiscal 1995 was the result of increased sales volumes and greater efficiencies and reduced costs due to the consolidation of facilities that took place in fiscal 1994 when the Company moved several product lines to its Woburn, Massachusetts plant. The decrease in gross profit for fiscal 1994 was the result of steadily deteriorating margins attributable primarily to the costs of maintaining dedicated resources in the semiconductor and component businesses for certain military programs, while revenues for these same programs declined. The facility consolidation during the fourth quarter of fiscal 1994 also decreased gross profit because of business interruptions and reengineering costs. Inventory liquidations resulting from shortened manufacturing cycles also contributed to lower gross profit during fiscal 1994.

Research and development expenses increased 21.1% in fiscal 1995 to \$4.2 million, or 5.3% of sales, from \$3.4 million, or 4.9% of sales in fiscal 1994. Research and development expenses increased 17.6% in fiscal 1994 from \$2.9 million, or 4.2% of sales in fiscal 1993. Research and development expenses have continued to increase as the Company shifts its focus from military programs to commercial wireless markets.

Selling and administrative expenses decreased to \$15.7 million, or 20.1% of sales, in fiscal 1995 from \$16.3 million, or 23.2% of sales in fiscal 1994. This decrease was primarily attributable to a reduction in administrative personnel completed during the fourth quarter of fiscal 1994, as a result of the consolidation of the Company's operations in Methuen, Massachusetts into its operations in Woburn, Massachusetts. In fiscal 1994 and 1993, selling and administrative expenses remained relatively constant in absolute dollars and as a percentage of sales.

Other expense was \$648,000 in fiscal 1995, compared to \$599,000 in fiscal 1994 and \$730,000 in fiscal 1993. In fiscal 1995, a reduction in interest expense was more than offset by reductions in interest income and other income, net. The decrease in fiscal 1994 compared to fiscal 1993 was primarily attributable to higher interest expense in fiscal 1993 relating to a settlement of prior year tax issues that included a substantial interest charge.

The provision for income taxes in fiscal 1995, 1994 and 1993 was \$502,000, \$270,000 and \$200,000, respectively. Although the Company had losses in fiscal 1994 and fiscal 1993, foreign and state income taxes were paid. The Company's effective tax rate for fiscal 1995 was 15.0%. This rate differed from statutory rates primarily as a result of the utilization of net operating loss carryforwards.

OUARTERLY RESULTS OF OPERATIONS

Repositioning

The Company's quarterly and annual results have in the past varied and may in the future vary significantly due to a number of factors, including: cancellation or delay of customer orders; market acceptance of the Company's or its customers' products; variations in manufacturing yields; timing of announcement and introduction of new products by the Company and its competitors; changes in revenue and product mix; competition; changes in manufacturing capacity and variations in the utilization of this capacity; variations in average selling prices; variations in operating expenses; the long sales cycles associated with the Company's customer specific products; the timing and level of product and process development costs; cyclicality of the semiconductor and ceramic industries; the timing and level of nonrecurring engineering revenues and expenses relating to customer specific products; and changes in inventory levels. Any unfavorable changes in these or other factors could have a material adverse effect on the Company's operating results.

The following table sets forth unaudited selected consolidated income statement data for the periods indicated, as well as such data expressed as a percentage of sales for the same periods. This information has been derived from unaudited consolidated financial statements which, in the opinion of management, include all adjustments (consisting only of normal recurring adjustments) necessary for a fair presentation of such information. The operating results for any quarter are not necessarily indicative of the results to be expected for any future period.

			QUARTER E			
	JUNE 30, 1994	SEPTEMBER 30, 1994	1994	MARCH 31, 1995		SEPTEMBER 30, 1995
	((IN THOUSANDS,	EXCEPT PER SH		RCENTAGE D)ATA)
INCOME STATEMENT DATA:						
Sales	\$18,675	\$18,253 	\$19,359	\$21,967	\$22,434	\$23,733
Costs and expenses:						
Cost of sales Research and	13,057	12,856	13,494	14,969	15,052	15,836
development Selling and	919	879	924	1,432	1,787	2,128
administrative Repositioning	3,778	3,559	3,917	4,473	4,429	4,308
credit(1)	-	-	-	-	(320)	-
Total costs and						
expenses	17,754	17,294	18,335	20,874	20,948	22,272
Operating income Other income (expense),		959	1,024		1,486	1,461
net	(178)	(146)	(185)	(139)	(176)	(188)
Income before income						
taxes Provision for income	743	813	839	954	1,310	1,273
taxes	140	154 	65	143	196	192
Net income		\$ 659 =====	\$ 774 ======	\$ 811 ======	\$ 1,114	\$ 1,081 ======
Per share data:						
Net income per share	\$ 0.08 =====	\$ 0.08 =====	\$ 0.10 =====	\$ 0.10 =====	-	\$ 0.13 ======
Weighted average common shares and common share						
equivalents	7,532	7,807 =====	7,815 ======	8,028 =====	,	8,208 =====
AS A PERCENTAGE OF SALES:						
Sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Costs and expenses:						
Cost of sales Research and	69.9	70.4	69.7	68.1	67.1	66.7
development	4.9	4.8	4.8	6.5	8.0	9.0
administrative	20. 3	19.5	20.2	20.4	19.7	18.1

credit(1)	-	-	-	-	(1.4)	-
Total costs and expenses	95.1	94.7	94.7	95.0	93.4	93.8
Operating income Other income (expense),	4.9	5.3	5.3	5.0	6.6	6.2
net	(0.9)	(0.8)	(1.0)	(0.7)	(0.8)	(0.8)
Income before income taxes	4.0	4.5	4.3	4.3	5.8	5.4
taxes	0.8	0.9	0.3	0.6	0.8	0.8
Net income	3.2%	3.6%	4.0%	3.7%	5.0%	4.6%

⁽¹⁾ In the quarter ended June 30, 1995, the Company recorded a \$320,000 repositioning credit, attributable to the reversal of certain accruals for estimated carrying costs, as a result of an earlier than expected disposition of the Methuen, Massachusetts facility.

FINANCIAL CONDITION

At September 30, 1995, working capital totaled \$11.1 million and included \$2.1 million in cash and cash equivalents, compared with \$11.0 million at the end of fiscal 1995. In July, 1995, the Company sold its Methuen, Massachusetts plant and received net proceeds of \$2.5 million. In connection with the sale, using the net proceeds and \$1 million borrowed under its line of credit, the Company retired \$3.5 million of related debt. During the first six months of fiscal 1996, cash generated from the Company's operations combined with additional borrowings under its line of credit were used to support increases in accounts receivables and inventories and capital additions resulting from the growth in new business. These capital additions included semiconductor and ceramic manufacturing equipment, as well as various information technology equipment, purchased for an aggregate of \$3.9 million. With the increased demand for its wireless products, the Company expects to increase its investment in production facilities and equipment by approximately \$12 million in the next 12 months.

In September 1995, the Company entered into a \$6.5 million working capital line of credit agreement which expires on August 1, 1997, of which approximately \$1.1 million was available at October 25, 1995, and a \$5.0 million equipment line of credit which expires on July 31, 1996, of which approximately \$4.0 million was available at October 25, 1995. Advances under these lines of credit bear interest at the prime rate or, at the Company's option, the LIBOR rate plus 200 basis points. The Company is also seeking approval from the State of Maryland for an additional \$3 million of grant funding to finance the planned expansion of its ceramic manufacturing facility. Other sources of financing have also been or are being pursued, such as increasing the amount of the line of credit, receiving additional grant funding and capital financing through leases.

The Company believes that its available lines of credit, together with cash generated from operations and the net proceeds of this offering, will be adequate to fund its operations and expected capital expenditures for at least the next eighteen months.

INTRODUCTION

The Company designs and manufactures a broad range of RF, microwave frequency and millimeter wave frequency MMICs, ceramic products, discrete semiconductors, and microwave and millimeter wave components and subsystems for wireless communications applications. These applications include cellular telephones, worldwide PCS/PCN, pagers, specialized mobile radio, wireless data services and GPS. The Company utilizes proprietary GaAs, ceramic and silicon process technologies to address the needs of wireless communications OEMs for smaller, less expensive and more power efficient products.

The Company gained extensive experience in the design and manufacture of GaAs MMIC's, discrete semiconductors, ceramic products and components and subsystems for millimeter wave frequencies in military applications. Over the past several years, the Company has refocused this knowledge and experience on the wireless communications commercial markets. As a result, the Company believes that it is well-positioned as higher frequencies are increasingly used in emerging wireless technologies such as PCS/PCN infrastructure equipment, wireless cable TV and automotive collision avoidance systems.

The Company currently focuses its sales and marketing efforts on the major OEMs in the wireless communications industry, such as Motorola, Nokia, Ericsson and AT&T, and their suppliers, with the objective of securing orders for high volume, application specific products. With available capacity at its GaAs fabrication facility, the Company believes that large volume product orders offer opportunities for economies of scale and improved margins. By maintaining close relationships with customers and by integrating its design and manufacturing capabilities, the Company can better anticipate its customers' needs and rapidly develop customer specific solutions based upon the Company's core technologies. The Company believes that this approach enhances the likelihood that the Company's products will be included in its customers' designs for new wireless communications products.

INDUSTRY OVERVIEW

The wireless communications industry has grown significantly during the past decade and worldwide demand for wireless communications services and related products and infrastructure continues to grow. This growth has been attributable to lower costs to the consumer and improvements in the quality and performance of many wireless technology products, including cellular telephones and associated infrastructure, worldwide PCS/PCN, pagers, specialized mobile radio, DBS TV and wireless data services. The industry has responded to an increased desire for mobility and untethered access to information in personal and business communications by making these products smaller, less expensive and with improved battery life. Additionally, wireless communications applications are growing in less developed countries because they offer the advantages of a modern telephone and cable TV system without the costly and time consuming development of an extensive wired infrastructure. Finally, new and emerging applications of wireless technology, such as GPS, wireless cable TV, RF identification tags, wireless local area networks ("wireless LANs") and automotive collision avoidance systems are increasing the size and scope of wireless communications markets.

A typical cellular communications system comprises a geographic region containing a number of cell sites, sometimes referred to as "base stations." These base stations transmit and receive signals from mobile or handheld units and, after processing, connect the signals to the local PBX switching office of the wireline telephone system. Digital radios with a millimeter wave carrier frequency increasingly are being used to network base stations to the PBX switching office. To offer better performance and accommodate increased communication traffic, cellular service providers are increasing the number of cell sites and attempting to reduce the cost of the infrastructure. At PCS/PCN frequencies, the infrastructure is being developed with substantially more and smaller cell sites than cellular telephone systems.

The rapid growth in the demand for wireless communications has led to increased communication traffic and congestion of the historically assigned frequency bands. At the same time, as new wireless communications technologies proliferate, users of wireless services want to send ever increasing amounts of data at ever greater transmission rates over wireless networks. These communications require greater bandwidth, which is primarily available at higher frequencies. For example, while cellular telephones operate at frequencies of 800 to 960 Mhz, handsets used in emerging worldwide PCS/PCN services operate at frequencies above 1.8 Ghz. The migration to higher frequency bands requires significant investment in wireless infrastructure. In addition, digital radio transceivers, utilizing millimeter-wave frequencies, are increasingly being used in place of land lines as a more economical means to link base stations in a cellular telephone or PCS/PCN system to the central switching office.

The Company believes that the new and emerging applications of wireless technology will operate at even higher frequencies. The chart below identifies some of the wireless applications according to the relative frequencies currently assigned to them.

[BAR CHART APPEARS HERE]

As the wireless communications industry has grown, competition among wireless OEMs has become increasingly intense. Consumers are demanding products that are smaller, less expensive and provide longer battery life, and demanding continual improvements, leading to shorter product design and manufacturing cycles. The Company believes that similar trends will characterize emerging wireless technology applications such as GPS, wireless cable TV, RF identification tags, wireless LAN and automotive collision avoidance systems.

GaAs and ceramic technologies have emerged as effective means to accommodate these higher frequency applications. GaAs technology for MMICs is an effective alternative or complement to silicon solutions for many wireless applications at higher frequencies. GaAs has inherent physical properties that allow its electrons to move up to five times faster than those of silicon. Also, the GaAs substrate is semi-insulating whereas silicon is conductive. The higher electron mobility provides for improved electrical performance at higher frequencies versus silicon and also results in improved power efficiency and consequently longer battery life. The semi-insulating properties of GaAs permit integration in a single device of numerous functions which currently cannot be realized effectively in silicon-based MMICs, thereby permitting further miniaturization with GaAs.

Ceramic material is an electrically passive medium that may be used for low loss RF components. Certain ceramic materials exhibit high dielectric constants which allow more compaction by reducing the electrical wavelengths within the material enabling miniaturization. Filter technology is increasingly important as handsets are developed to operate within narrower bands of the frequency spectrum. Wireless handset manufacturers use ceramic filters to reduce out-of-band noise. Dielectric resonator filters, dielectric resonators, ferrites and coaxial resonators, such as those manufactured by the Company, are used in cellular and PCS/PCN handset and infrastructure equipment for a variety of filtering and other purposes.

THE ALPHA STRATEGY

The Company's objective is to be a leading supplier of a broad and complementary selection of GaAs RF, microwave and millimeter wave MMICs, ceramic products, silicon discrete semiconductors, and microwave and millimeter wave components and subsystems used in both infrastructure and handheld equipment for the wireless communications industry. Key elements of the Company's strategy are:

- . Leverage Process Technologies in GaAs, Ceramic and Silicon. The Company uses its extensive experience in vertically integrated process technologies for GaAs MMICs, ceramic products and silicon discrete semiconductors to capitalize on the demand in the wireless communications markets for smaller and more power efficient products. The Company addresses smaller size and power efficiency by integrating more discrete components and functions onto its GaAs MMICs. It utilizes high dielectric ceramic materials to reduce size and improve performance. For example, the Company's ceramic products are widely used in cellular base stations due to their size and performance. In addition, its GaAs MMICs are well suited for amplification, switching and control functions in wireless handsets where power, size and efficiency are important considerations.
- . Offer a Broad Array of Products Across the Frequency Spectrum. The Company offers a broad array of products in GaAs, ceramic and silicon that address a wide portion of the wireless communications frequency spectrum, including RF, microwave and millimeter wave. This enables the Company to offer an increasing portion of the "footprint" in wireless communications handheld and infrastructure equipment. Wireless OEMs therefore have the opportunity to satisfy an increasing percentage of their component needs from the Company.

The Company gained extensive experience in the design and manufacture of millimeter wave MMICs and ceramic products in prior years as a military subcontractor. As a result, the Company believes that it is currently well-positioned in the commercial industry as higher frequencies are increasingly used in emerging applications of wireless technologies, such as PCS/PCN infrastructure equipment, wireless cable TV and automotive collision avoidance systems. Furthermore, the Company's experience with millimeter wave technologies and processes has enhanced its ability to offer microwave frequency products which demand less rigorous design and manufacturing processes than those required for the higher frequency millimeter wave products.

. Become a High Volume, Low Cost Manufacturer. The Company believes that large volume product orders offer opportunities for economies of scale and improved margins. The Company currently utilizes its internal wafer fabrication facilities in Woburn, Massachusetts and one external foundry to satisfy its GaAs MMIC processing requirements. As the Company develops new GaAs products and

demand increases, it will continue to migrate manufacturing to its internal fabrication facilities, where capacity currently exists, in order to reduce costs and improve operating margins. However, the Company will continue to use external fabrication facilities when dual sourcing is advantageous or when outsourced capacity is needed for established product designs.

In ceramics, the Company attempts to assure consistency, reproducibility and low costs through a vertically integrated manufacturing process, from formulating and blending raw materials, through forming, firing and finishing the final products. By controlling the critical processes and tightly coupling the materials process with design and fabrication, the Company is able to offer ceramic products which enhance the electrical performance of the customers' circuit design.

The Company has invested in design automation and has developed high volume testing systems and production processes to maintain high manufacturing yields. The Company pursues continuous improvements in all phases of its operations, and its Woburn, Massachusetts facility is ISO 9001 certified.

Supply Worldwide Industry Leaders; Respond to Need for Rapid Design Cycle Times. The Company focuses its sales and marketing efforts on the dominant OEMs and their principal suppliers in the wireless communications industry to secure orders for high volume, application specific products. These OEMs currently include Motorola, Nokia, Ericsson and AT&T. The Company continues to develop close relationships with its customers. By remaining in close contact with design engineering, manufacturing, purchasing and project management of its customers, the Company can better anticipate its customers' needs, rapidly develop customer specific solutions based upon the Company's core technologies and successfully design the Company's solutions into the customers' final products. The Company also strives to capitalize on its design experience, process technology and efficient wafer fabrication and ceramic production capabilities to quickly develop prototypes that can be ready for testing, demonstrating rapid design cycle time.

PRODUCTS AND MARKETS

The Company has one of the wireless communications industry's broadest selections of RF front-end products serving a number of functions and a wide range of applications, including cellular and PCS/PCN handsets, base stations and digital radio links, pagers, specialized mobile radio, wireless data services, GPS, DBS TV, wireless cable TV, RF identification tags and automotive collision avoidance systems.

The Company's products serve the following functions:

Amplification. Wireless communications systems require signal amplification in both the receive and transmit sections of the system. Of critical importance in the receive function is the ability to amplify the relatively weak incoming signal without adding background noise. GaAs MMIC amplifiers contribute less noise than silicon amplifiers at frequencies above 1 GHz. This advantage becomes even greater at higher frequencies. The transmit and receive functions must use power efficiently because battery life is a critical system feature in portable applications. GaAs products can operate at lower supply voltages and provide superior power efficiency when compared to silicon components.

Switching and Control. Wireless communications equipment must route or adjust signal levels efficiently between the receiver and transmitter and other processing devices. This routing is typically accomplished with high speed switching components. As signals pass through these switches, the quality and strength of the signal can be degraded, resulting in a loss of signal power. The semi-insulating properties of GaAs MMIC structures used by the Company provide lower insertion loss and improved isolation in comparison to comparable silicon products and therefore generally provide a better vehicle for integrated switching functions.

Frequency Conversion. After an incoming signal is received, it is converted to a lower frequency for easier processing. Processed signals are also converted to higher frequencies before being transmitted. These "down conversion" and "up conversion" functions provide opportunities for GaAs MMIC solutions,

particularly at higher frequencies. GaAs MMICs reduce signal interference and have power gain through these conversions.

Filtering. Filtering is used to prevent unwanted frequencies from interfering with the frequencies which are carrying the relevant information. Wireless communications systems often have transmitters which operate at slightly different frequencies than the receivers and these signals must be kept separate. Wireless antennas can also pick up ambient background signals which must be filtered out from the receiver path. The Company's high performance dielectric and coaxial resonator filters perform these functions in both base stations and handsets.

Oscillation. Oscillators are used to generate the radio frequencies which are used in wireless communications. They are part of the frequency conversion function which uses "up conversion" to convert voice and data information up to radio frequencies for transmission and "down conversion" to convert them back down for digital signal processing in the receivers. The Company's ceramic coaxial resonators and discrete semiconductors are used to accurately define and control the frequency of oscillation.

These functions, along with all of the functions in a typical cellular handset, are identified in the diagram below.

[ART OF TYPICAL WIRELESS COMMUNICATIONS HANDSETS APPEARS HERE]

The Company categorizes its product lines and core technologies as follows:

- RF, Microwave and Millimeter Wave MMICs
- . Ceramic Products
- . Discrete Semiconductors
- . Millimeter Wave Components and Subsystems

The chart below identifies the major markets currently served by each of the Company's product lines. In addition, the Company's products serve other wireless markets.

[CHART]

- ------

(1) These applications do not utilize millimeter wave components and subsystems.

RF, Microwave and Millimeter Wave MMICs. The Company designs and manufactures RF, microwave and millimeter wave MMICs in GaAs that integrate numerous functions performed by discrete semiconductors. The functions of the Company's GaAs MMICs include amplification, switching and control and frequency conversion of signals in the radio transceiver portion of wireless communications systems. In wireless voice and data applications, the Company's GaAs MMICs are used in the handheld unit, base station transceivers and point to point radio links between the base station and local wireline network. The Company's millimeter wave MMICs connect transmissions between base stations, including the local wireline PBX switching office. The Company believes that this function is growing in importance, and that it will continue to do so as a greater percentage of the higher frequency spectrum is allocated to accommodate the increase in wireless communications traffic.

Ceramic Products. The Company's ceramic products play a critical role in the signal selection, or filtering process, that is essential to processing communications signals. The physical properties of ceramic materials are suitable for power efficiency and miniaturization. The Company is a major supplier of miniature ceramic antennas to manufacturers of GPS receivers, particularly for compact handheld units which are gaining popularity. Ceramic products are crucial in the frequency-determining portions of DBS TV receivers, radar detectors and intrusion alarms. They are also shrinking the size of cellular radio base station equipment.

Discrete Semiconductors. The Company fabricates discrete surface mount semiconductors in both GaAs and silicon as stand alone components for specialized applications which are not addressed efficiently by MMICs. Silicon technology continues to be used for discrete semiconductors when circuit integration is not possible or for certain applications for which the properties of silicon material provide better performance. Discrete semiconductors are used for amplification, switching and control and frequency conversion in base stations, transmitters and receivers of cellular handsets.

Millimeter Wave Components and Subsystems. Millimeter wave applications operate above the microwave frequency range, primarily between 20 Ghz and 300 Ghz. The Company has been an industry leader in the design and manufacture of millimeter wave components and subsystems for military and defense related applications. This experience established the Company's advanced millimeter wave MMIC capability. It also provides the Company with technological and cost advantages in commercial applications, such as PCS/PCN and cellular telephone infrastructure equipment. The Company manufactures MMIC based amplifiers, transmitters and receivers, as well as single function components such as Gunn oscillators, mixers, isolators and circulators for commercial applications, including PCS/PCN radio equipment, and in emerging markets for intelligent automobile cruise control and collision avoidance systems.

CUSTOMERS

The Company's customers include leading OEMs and their principal suppliers in the wireless communications industry. During the first six months of fiscal 1996, approximately 81% of the Company's new orders were from OEMs and their suppliers for commercial products, and the remaining 19% of new orders were for use in a wide variety of military and defense related systems. The Company anticipates that the percentage of the Company's sales attributable to military and defense related systems will continue to decline for the foreseeable future. See "Management's Discussion and Analysis of Financial Condition and Results of Operations." During such period, the Company's direct sales to Motorola, Ericsson, Nokia and AT&T, in the aggregate, accounted for approximately 18% of the Company's sales. The Company's direct sales to six other customers, believed by the Company to be among the suppliers to these four OEMs, accounted for an additional 8% of the Company's sales during such period. For the first six months of fiscal 1996, direct sales to Motorola, excluding sales to its suppliers, accounted for approximately 9.8% of the Company's sales. Direct sales to no one customer accounted for in excess of 10% of the Company's sales during fiscal 1995 or the first six months of fiscal 1996.

One of the Company's major stockholders, which owns approximately 20% of the Company's outstanding Common Stock (prior to giving effect to the offering contemplated hereby), is a significant customer of the Company, accounting for approximately 3.7% of the Company's sales for the first six months of fiscal 1996. The Company believes that all transactions with this stockholder have been negotiated at arms-length and have been on terms and conditions no less favorable to the Company than the Company could obtain in transactions with independent third parties.

SALES AND MARKETING

The Company sells its products through independent manufacturers' representatives and through a direct sales staff. The Company currently has 14 domestic and 21 international independent manufacturers' representative organizations. The Company's 26 person direct sales and marketing staff manages the manufacturers' representatives on a regional basis and provides sales direction and support to the manufacturers' representatives. The direct sales staff also manages key customer accounts and worldwide customer support.

The Company believes that the technical and complex nature of its products and markets demands an extraordinary commitment to close ongoing relationships with its customers. The Company strives to remain in close contact with its customers' design, engineering, manufacturing, purchasing and project management. The Company employs a team approach in developing such relationships, combining the support of design and applications engineers, manufacturing personnel, sales and marketing staff and senior management. The Company's objective in developing such relationships is to become an extension of the customer's design department. With a more comprehensive understanding of its customers' requirements for current products and plans for future applications, the Company believes it enhances its opportunities for design wins.

COMPETITION

The Company competes on the basis of price, performance, quality, reliability, size, ability to meet delivery requirements and customer service and support. The Company experiences intense competition worldwide from a number of multinational companies that offer a variety of competitive products and broader product lines, and which have substantially greater financial resources and production, marketing, manufacturing, engineering and other capabilities than the Company. The Company also faces competition from a number of smaller companies. In addition, the Company's customers, particularly its largest customers, may have or could acquire the capability to develop or manufacture products competitive with those that have been or may be developed or manufactured by the Company. The Company's future operating results may depend in part upon the extent to which these customers elect to purchase from outside sources rather than develop and manufacture their own systems. There can be no assurance that such customers will rely on or expand their reliance on the Company as an external source of supply. See "Risk Factors--Competition."

The production of GaAs MMICs is, and the Company believes will continue to be, more costly than the production of silicon devices. As a result, the Company must offer devices which provide superior performance to that of silicon for specific applications in order to be competitive with silicon devices. There can be no assurance that the Company's GaAs MMICs will be able to provide such superior performance.

The Company expects its competitors to continue to improve the performance and lower the price of their current products and to introduce new products or new technologies with enhanced functionality and new features. The Company expects to continue to experience significant price competition that may adversely affect its gross margins and its operating results. The Company believes that to remain competitive, it will continue to be required to expend significant resources on, among other things, new product development and enhancements, as well as manufacturing efficiencies to reduce costs. There can be no assurance that the Company will be able to compete successfully in the future.

MANUFACTURING

The Company has extensive expertise in manufacturing process technologies for GaAs MMICs, discrete silicon semiconductors and ceramic products. The Company's manufacturing operations are vertically integrated and the Company attempts to control all critical steps in the manufacturing process in order to shorten product design and manufacturing cycles, improve product quality and reliability and reduce costs. In its Woburn, Massachusetts facility, the Company designs, fabricates, tests and assembles GaAs MMICs, discrete silicon semiconductors and components and subsystems. The Company's ceramic manufacturing facility controls formulation, powder preparation, forming, firing and finishing, as well as value-added assembly of its products. The Company seeks to implement statistical process control and similar methods throughout its operations as a means to monitor and improve product quality. Many of the Company's manufacturing process technologies are proprietary.

The Company's Woburn, Massachusetts design and manufacturing processes were certified as ISO 9001 compliant in 1994. In addition, the Company has successfully passed intensive audits by its major customers, Motorola, Nokia, Ericsson and AT&T. The Company emphasizes intensive personnel training and management support. Employees participate in 50 or more hours of classroom training each year.

The Company has in-house assembly capabilities but also uses several subcontractors in Asia to package and wirebond very large volume orders of integrated circuits. Although it is the Company's policy to have at least two assembly houses located in different countries for each assembly process, at times the Company is unable to achieve this goal because of minimum volume requirements, service quality issues or other factors. After assembly, the packaged products are returned to the Company for final testing in the Company's automated production test facilities. The Company monitors the processes of each subcontractor, reviewing the subcontractor's quality system, production process, statistical and reliability program on an ongoing basis. The Company's policy is to utilize, whenever possible, ISO 9001 certified and Semiconductor Assembly Counsel

("SAC") certified subcontractors or those subcontractors who are currently pursuing SAC registration. A reduction or interruption in the performance of assembly services by subcontractors or a significant increase in the price charged for such services by subcontractors could adversely affect the Company's operating results. See "Risk Factors--Dependence on Assembly Contractors."

The fabrication of GaAs MMICs and semiconductor products is highly complex and sensitive to dust and other contaminants, 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. The less mature stage of GaAs technology relative to silicon leads to somewhat greater difficulty in controlling parametric variations, thereby yielding fewer good die per wafer. In addition, the more brittle nature of GaAs wafers can result in higher processing losses. To maximize wafer yield and quality, the Company tests its products at various stages in the fabrication process, maintains continuous reliability monitoring and conducts numerous quality control inspections throughout the entire production flow using analytical manufacturing controls. See "Risk Factors--Manufacturing Risks: Product Quality, Performance and Reliability."

The Company's operation of its own wafer fabrication facility entails a high degree of fixed costs. Such fixed costs consist primarily of occupancy costs for the manufacturing facilities, investments in manufacturing equipment, repair, maintenance and depreciation costs related to such equipment and fixed labor costs related to manufacturing and design and process engineering.

The raw materials and equipment used in the production of the Company's products are available from several suppliers and the Company is not dependent upon any sole source of supply. However, the Company does procure certain materials, components and services for its products from single or limited sources. Although, on occasion, shortages have occurred and lead times have been extended, the Company has not experienced any material difficulties in obtaining raw materials or equipment. A supplier's variation in raw materials could have a material adverse effect on the Company's business. If the Company were to change suppliers, the Company would have to requalify the components of such suppliers, causing potential delays. Also, prices could increase in connection with changes in suppliers. See "Risk Factors--Limited Sources of Materials and Services."

RESEARCH AND DEVELOPMENT

The Company's research and development efforts are focused on the development of new products based upon its core technologies that will be marketed and sold through the Company's existing sales channels. The Company is seeking to improve existing product performance, reduce costs, and improve design and manufacturing processes. The Company's research and development is focused on creating application specific designs that fully incorporate its customers' system design goals, and on providing rapid design-cycle time, well-defined design rules and highly repeatable, stable processes. In developing new products, the Company utilizes a product platform concept, in which new products are based on the fundamental architectures of existing products.

The Company developed much of its millimeter wave technology in connection with approximately 25 years of military and defense related contracts involving sophisticated millimeter wave semiconductor and ceramic products. The Company is using the techniques, processes and experience in millimeter wave technology developed in connection with these government programs for current and emerging commercial applications. In furtherance of the Company's research and development program, the Company will pursue and accept only those government, military and defense-related contracts that advance the Company's core technology for commercial applications in the wireless communications industry or offer high profit margin potential with low risk.

The Company's research and development expenditures, including both Company-sponsored and customer-sponsored research and development, for fiscal 1993, 1994 and 1995 and the first six months of fiscal 1996, were \$14.6 million, \$13.8 million, \$12.4 million and \$6.8 million, respectively. See "Management's Discussion and Analysis of Financial Condition and Results of Operations."

The wireless communications market is subject to rapid technological change, frequent new product introductions and enhancements, product obsolescence, changes in end-user requirements and evolving industry standards. The Company's ability to be competitive in this market will depend in significant part upon its ability to successfully develop, introduce and sell new products on a timely and cost effective basis that respond to changing customer requirements. See "Risk Factors--Product and Process Development and Technological Change."

GOVERNMENT REGULATIONS

Wireless communications are subject to extensive regulation by the laws of the United States and other countries and international treaties. The Company's products are incorporated into OEM final products which must conform to a variety of domestic and international requirements established, among other things, to avoid interference among users of wireless devices and to permit interconnection of equipment. Every country has a different regulatory process. Regulatory bodies worldwide are continuing the process of adopting new standards for wireless communication products. The delays inherent in this governmental approval process may cause the cancellation, postponement or rescheduling of the installation of wireless communications systems incorporating the Company's products by its customers, which in turn may have a material adverse effect on the sale of products by the Company to such customers. The Company is also affected to the extent that domestic and international authorities regulate the allocation of the radio frequency spectrum and impose technical standards. Equipment to support new services can be marketed only if permitted by suitable frequency allocations and regulations, and the process of establishing new regulations is complex and lengthy. Failure by the regulatory authorities to allocate suitable frequency spectrum could delay the expansion of the market potential for the Company's products.

The regulatory environment in which the Company operates is subject to change. Regulatory changes, which are affected by political, economic and technical factors, could significantly impact the Company's operations by restricting development efforts by the Company's customers, making current systems obsolete, expanding market opportunities for the Company's competitors, or otherwise increasing the opportunity for additional competition. Any such regulatory changes, including changes in the allocation of available spectrum, could have an effect on the Company's business and operating results, which effect could be material and adverse. See "Risk Factors--Government Regulation of Communications Industry."

INTELLECTUAL PROPERTY

The Company believes that the success of its business will depend more on the technical competence, creativity and manufacturing and marketing abilities of its employees than on patents, trademarks and other intellectual property rights. The Company's objective is to foster continuing technological innovation to maintain and protect its competitive position. Nevertheless, the Company has a policy of seeking patents when appropriate on inventions resulting from its ongoing research and development and manufacturing activities.

The Company relies primarily on trade secret laws, confidentiality procedures and licensing arrangements to protect its intellectual property rights. The Company enters into confidentiality and nondisclosure agreements with its service providers, customers, employees and others, and attempts to limit access to and distribution of its proprietary information. However, there can be no assurance that such measures will adequately protect the Company's trade secrets or other proprietary information, that disputes with respect to the ownership of its intellectual property rights will not arise, that the Company's trade secrets or proprietary technology will not otherwise become known or be independently developed by competitors or that the Company can otherwise meaningfully protect its intellectual property rights. See "Risk Factors--Difficulty in Protecting Intellectual Property."

Although there are no pending lawsuits against the Company regarding infringement of any existing patents or other intellectual property rights, the Company from time to time is notified of claims that the Company may be infringing patent, trademark, mask work, copyright or other proprietary rights of third parties. Furthermore,

there can be no assurance that such infringement claims will not be asserted by third parties in the future with respect to the Company's products or that the Company's products will not infringe patent, trademark, mask work, copyright or other proprietary rights of third parties. The Company may seek to obtain licenses from third parties under such rights or may attempt to develop non-infringing technology. There can be no assurance that the Company will obtain any such licenses upon acceptable terms or that the Company would be successful in developing such non-infringing technology. The Company's involvement in any patent dispute or other intellectual property dispute or action to protect trade secrets and know how could have a material adverse effect on the Company's business. Adverse determinations in any litigation could subject the Company to significant liability to third parties, require the Company to seek licenses from third parties and prevent the Company from manufacturing and selling its products. Any of these situations could have a material adverse effect on the Company's business. See "Risk Factors--Intellectual Property Claims."

EMPLOYEES

As of September 30, 1995, the Company had approximately 930 employees, including 630 in manufacturing, 160 in engineering, research and development, 65 in marketing and sales, and 75 in administration and finance. None of the Company's employees is represented by a collective bargaining agreement, nor has the Company experienced any work stoppage. The Company considers its relations with its employees to be good.

FACILITIES

The Company's corporate headquarters and its MMIC, discrete semiconductor, and components and subsystems operations occupy a 158,000 square foot facility owned by the Company in Woburn, Massachusetts. At the Woburn facility, approximately 108,000 square feet are devoted to design, development and manufacture of MMICs, discrete semiconductors, and components and subsystems. The Woburn facility includes a 6,000 square foot class 100 clean room (no more than 100 particles larger than 0.5 microns in size per cubic foot of air), a 6,000 square foot class 10,000 clean room (no more than 10,000 particles larger than 0.5 microns in size per cubic foot of air) and a 6,000 square foot class 100,000 clean room (no more than 100,000 particles larger than 0.5 microns in size per cubic foot of air) and a 6,000 square foot class 100,000 clean room (no more than 100,000 particles larger than 0.5 microns in size per cubic foot of air).

The Company owns a 92,000 square foot facility in Adamstown, Maryland which is the Company's primary ceramic products manufacturing facility. In addition, the Company leases an approximate 33,000 square foot facility in Frederick, Maryland to provide additional manufacturing capacity for dielectric resonator filters. This lease expires in August 1997. The Company also leases a 7,200 square foot facility in Marly, France, which lease expires in 2008, and rents a 3,600 square foot facility in Milpitas, California on a month-to-month basis. The facilities in France and California are also utilized in the Company's ceramic products manufacturing operations.

The Company is currently operating slightly more than one shift at the Woburn, Massachusetts facility, and intends to add a full second shift before the end of 1995. The equipment is generally utilized in the facility at approximately 40% of capacity based on an assumed three shift, five day per week operation. The Company intends to use a portion of the proceeds of this offering to acquire additional MMIC production equipment and to upgrade its wafer fabrication facilities in order to increase production capacity. With this additional manufacturing equipment, the Company believes that this facility will meet production capacity requirements over the next two to three years. The Company also believes that available capacity at its Woburn facility provides it with significant opportunities to improve operating margins by adding additional shifts, without significantly increasing manufacturing fixed costs, as sales volumes increase. See "The Alpha Strategy." The Company believes additional manufacturing capacity is needed to meet current demand for ceramic products and intends to use a portion of the net proceeds of this offering to expand its ceramic manufacturing capacity in Maryland. See "Use of Proceeds."

MANAGEMENT

DIRECTORS AND EXECUTIVE OFFICERS

The directors and executive officers of the Company are as follows:

NAME	AGE	POSITION
George S. Kariotis Martin J. Reid David J. Aldrich	54	Chairman of the Board of Directors Director, President and Chief Executive Officer Vice President, Chief Financial Officer and
P. Daniel Gallagher Thomas C. Leonard Joseph J. Alberici	61	Treasurer Vice President Vice President Vice President, President and Chief Executive Officer of Trans-Tech, Inc.
Paul E. Vincent	59 74 70	Controller Director Director Director Director

The Company's 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 term 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 the Company's Common Stock, or upon the vote of a majority of the directors then in office.

George S. Kariotis was Chairman of the Board and Chief Executive Officer from 1962 when the Company was founded until 1978, and, from 1974 to 1978, he was also Treasurer of the Company. 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 of the Company 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.

Martin J. Reid was a Vice President of the Company from 1975 to 1981, and from 1981 to 1985, he was a Senior Vice President of the Company. Mr. Reid was elected President, Chief Operating Officer and became a Director in 1985. He was elected acting Chief Executive Officer in July 1986 while Mr. Kariotis campaigned for public office, and relinquished that position and resumed his position as Chief Operating Officer in November 1986 after Mr. Kariotis' campaign. Mr. Reid was elected to the position of Chief Executive Officer in 1991.

David J. Aldrich joined the Company in 1995 as Vice President, Chief Financial Officer and Treasurer. From 1989 to 1995, Mr. Aldrich held several 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. Prior to joining M/A-COM, Inc., Mr. Aldrich was Controller with Adams Russell Electronics Company from 1984 to 1989 and a project leader for a NASA satellite communications program with Space Communications Company (a Fairchild Industries and Contel Inc. Partnership) from 1981 to 1983. Mr. Aldrich is a director of CableMaxx, Inc., a wireless cable television service provider.

P. Daniel Gallagher joined the Company in 1989 as Director of Device Operations of the Company's Devices Group, and was elected Vice President in 1990. Previously, he held a series of engineering and marketing positions at M/A-COM, Inc., beginning with his initial assignment as a semiconductor engineer in 1968. He was appointed a Vice President of Marketing of M/A-COM, Inc. in 1980, and in his last assignment he was the Vice President-General Manager of the M/A-COM, Inc. Lowell Semiconductor Operation. Mr. Gallagher began his career in 1966 with ITT UK as a semiconductor process engineer.

Thomas C. Leonard joined the Company in 1992 as General Manager of the Components and Systems Division. He became the General Manager of Operations for the Alpha Microwave Division effective January 1994 and was elected a Vice President in 1994. Mr. Leonard has over 30 years experience in the microwave industry, having held a series of general managerial and marketing positions at M/A-COM, Inc., from 1972 to 1992 and prior to 1972 at Varian Associates and Sylvania.

Joseph J. Alberici joined Trans-Tech, Inc., a subsidiary of the Company, in 1987 and has held several positions with Trans-Tech, Inc., including Vice President of Marketing and New Products, Executive Vice President and Chief Operating Officer. He has been President and Chief Executive Officer of Trans-Tech, Inc. since 1992 and was elected Vice President of the Company in 1994. Prior to 1987, Mr. Alberici was Plant Manager of the Microwave Products Division for MuRata Erie NA. In addition, from approximately 1974 to 1979, Mr. Alberici held several engineering positions with Lambda Electronics and American Technical Ceramic.

Paul E. Vincent has held his position as Controller since he joined the Company in 1979.

Arthur Pappas, a Director of the Company since 1988, was a founder and, from 1969 to 1979, Vice President Finance and Operations of Datel Systems, Inc., a manufacturer of data conversion products. Mr. Pappas was a founder and, from 1980 to 1984, President of Power General Corporation, a manufacturer of switching power supplies. Mr. Pappas then founded and from 1985 to 1988 was Chairman of Metra-Byte Corporation, a manufacturer of measurement and control products for personal computers. Most recently, Mr. Pappas founded and since 1994 has been Chairman of Astrodyne Corporation, a manufacturer of power supplies.

Raymond Shamie, a Director of the Company since 1985, was President of Shamie Management Corporation from 1986 to 1995. Prior to 1986, Mr. Shamie was Chairman of the Board and Chief Executive Officer of Metal Bellows Corporation, a manufacturer of pressure sensing and fluid control systems for aerospace and nuclear applications.

Sidney Topol, a Director of the Company since 1992, is a Director of Scientific Atlanta, Inc., a manufacturer of satellite communications and cable television equipment, and Wandel and Golterman Technologies, Inc., a manufacturer of test instruments. Mr. Topol has been President of The Topol Group, Inc., a consulting company, since 1989. 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 for 22 years.

Charles A. Zraket became a Director of the Company in September 1995. From 1958 until 1990, Dr. Zraket was employed in various capacities, most recently as President and Chief Executive Officer, by the MITRE Corporation, a not-for-profit research and systems engineering organization. Dr. Zraket currently is a trustee of the MITRE Corporation, Northeastern University, Beth Israel Hospital, the Hudson Institute and Chairman of the Computer Museum in Boston. He is also a Director of Wyman-Gordon Corporation.

DESCRIPTION OF CAPITAL STOCK AND OTHER MATTERS

The authorized capital stock of the Company consists of 30,000,000 shares of Common Stock, \$.25 par value per share.

The following descriptions of the capital stock and certain additional charter provisions relating to changes in control and directors' liability, are qualified in their entirety by reference to the Company's Restated Certificate of Incorporation and Amended and Restated By-Laws.

COMMON STOCK

The issued and outstanding shares of Common Stock are validly issued, fully paid and non-assessable. The Common Stock offered hereby, when issued and sold as contemplated by this Prospectus, will be validly issued, fully paid and non-assessable.

The holders of Common Stock are entitled to one vote per share on all matters to be voted upon by the stockholders of the Company. The holders of Common Stock are entitled to receive dividends out of assets legally available therefor at such times and in such amounts as the Board of Directors may determine. For a description of contractual limitations on the Company's ability to pay dividends, see "Dividend Policy." The shares of Common Stock are neither redeemable nor convertible, and the holders thereof have no preemptive or, except as described under "Rights Distribution," below, subscription rights to purchase any securities of the Company. Upon liquidation, dissolution or winding up of the Company, the holders of Common Stock are entitled to receive pro rata the assets of the Company which are legally available for distribution, after payment of all debts and other liabilities.

At September 30, 1995, 7,808,722 shares of Common Stock were outstanding and held of record by approximately 1,200 stockholders. Options to purchase an aggregate of 849,222 shares of Common Stock were also outstanding at September 30, 1995.

WARRANT

As of September 30, 1995, the Company had outstanding an immediately exercisable warrant to purchase 50,000 shares of Common Stock, at an exercise price of \$3.75 per share. This warrant is held by Silicon Valley Bank and expires on April 1, 1999. In the event that the Company registers any of its securities under the Securities Act, Silicon Valley Bank has the right to require the Company to register the shares issuable pursuant to the warrant, subject to certain limitations, as set forth in the warrant. These registration rights have been waived with respect to this offering.

TRANSFER AGENT AND REGISTRAR

The Transfer Agent and Registrar of the Common Stock is BancBoston State Street Investor Services.

ADDITIONAL CHARTER PROVISIONS

The Company's Restated Certificate of Incorporation and Amended and Restated By-Laws include several provisions which may render more difficult an unfriendly tender offer, proxy contest, merger or change in control of the Company. See "Risk Factors--Impediments to Changes in Control."

The Company's Restated Certificate of Incorporation provides (i) for the classification of the Board of Directors into three classes with staggered terms of office, (ii) that all stockholder action must be taken at a stockholders' meeting, thereby eliminating the right to take action by written consent of the holders of 51% of the outstanding Common Stock, (iii) that the affirmative vote of the holders of 80% of the Company's outstanding voting stock is necessary to approve a merger or consolidation, a sale, lease, exchange, mortgage, pledge or other disposition of substantially all of the Company's assets, or the issuance or transfer of securities

or assets of the Company having a fair market value exceeding \$500,000 in exchange for securities of another business entity, unless such transaction is approved by a majority of the directors who held office prior to the time a person or entity proposing such a transaction became the beneficial owner of 5% of the outstanding stock of the Company and (iv) that 80% of the number of outstanding shares of Common Stock is required to amend these provisions in the Restated Certificate of Incorporation. The Restated Certificate of Incorporation also requires business combinations involving the Company and any holder (including affiliates, associates and others who may be acting in concert with such holder) of more than 20% of the voting power of the Company's outstanding capital stock (a "Related Person") to be approved by the holders of 90% of the outstanding voting stock of the Company, unless (i) the business combination is approved by a majority of the members of the Board of Directors who are unaffiliated with the Related Person and who were members of the Board of Directors at the time the Related Person became a Related Person ("Continuing Directors") or successor directors recommended by such Continuing Directors who are also unaffiliated with the Related Person, and (ii) certain minimum price requirements and other conditions are met. Amendment of the "fair price provision" may be effected only by a vote of the holders of 90% or more of all of the Company's outstanding shares of voting stock.

The Company's Amended and Restated By-Laws do not authorize stockholders holding a majority of the Company's outstanding voting stock to call a special meeting of stockholders. Special meetings of stockholders may only be called by the President or by the Board of Directors. The Amended and Restated By-Laws also provide that directors may be removed only for cause.

Options issued under the Company's 1986 Long-Term Incentive Plan and the 1994 Non-Qualified Stock Option Plan for Non-Employee Directors are subject to vesting schedules ranging from one to five years. However, such options become immediately exercisable upon a change in control of the Company.

RIGHTS DISTRIBUTION

In 1986, the Board of Directors declared a dividend distribution of one right (a "Right") for each outstanding share of Common Stock held of record on December 5, 1986 or issued thereafter prior to the "Separation Time," as defined below. After December 5, 1986 and for so long as the Rights are not transferable separately from the Common Stock, one Right is deemed to be delivered with each share of Common Stock issued or transferred by the Company, including shares of Common Stock issuable in this offering and under the Company's Savings and Retirement Plan, Employee Stock Purchase Plan, 1994 Non-Qualified Stock Option Plan for Non-Employee Directors and the 1986 Long-Term Incentive Plan.

The "Separation Time" is the close of business on the earlier of (i) the tenth business day (or such earlier or later date not beyond the thirtieth day as the Board of Directors may decide) (a "Flip-in Date"), after the announcement that a person has acquired 10% or more of the outstanding Common Stock of the Company (or that a person already owning 10% has acquired any more Common Stock) (an "Acquiring Person") or (ii) the tenth business day (or such later date as the Board of Directors may decide) after any person commences a tender or exchange offer to acquire beneficial ownership of 10% or more of the outstanding shares of Common Stock. Until the Separation Time, the Rights will be evidenced solely by the Common Stock certificates and may be transferred only with the Common Stock.

After the Separation Time, the Rights become exercisable and may be transferred independently of shares of Common Stock, and separate certificates evidencing the Rights will be mailed to stockholders. The Rights will expire on the earlier of (i) December 5, 1996, or (ii) the date on which the Rights are redeemed.

Commencing after a Flip-in Date has occurred, the holders of Rights, except the Acquiring Person, are entitled to purchase that number of shares of the Company's Common Stock having a market value equal to twice the exercise price of \$30 per share (the "Exercise Price"). However, in lieu of the right to purchase shares of the Company's Common Stock at an effective 50% discount, the Board of Directors of the Company may elect to issue one share of Common Stock for each Right held by each holder other than the Acquiring Person.

After an Acquiring Person has become such and prior to the expiration of the Rights, the Company may not (i) consolidate or merge with any other person, (ii) sell or otherwise transfer to any other person more than 50% of the Company's assets, or assets generating more than 50% of the Company's operating income or cash flow, (iii) engage in certain self-dealing transactions with Acquiring Persons, or (iv) permit certain events to occur when there is an Acquiring Person, if at the time of such merger, sale or self-dealing transaction the Acquiring Person controls the board of directors and, in the case of merger, will receive different treatment than other stockholders, unless in any such case provision is made so that each holder of a Right will thereafter have the right to receive, at the then current Exercise Price, a number of shares of common stock of the Acquiring Person engaging in the transaction having a market value equal to two times the Exercise Price of the Right.

The Rights may be redeemed by the Company for \$.05 per Right, either in cash or in Common Stock, at any time prior to the close of business on a Flip-in Date.

The provisions in the Restated Certificate of Incorporation and Amended and Restated By-Laws referred to above, and the authority under the 1986 Long-Term Incentive Plan to grant options with accelerated vesting schedules in the event of a change in control of the Company, as well as the authority of the Board of Directors to issue additional shares of Common Stock and accelerate the exercisability of the Rights could be used by the Board of Directors in a manner calculated to prevent the removal of management and make more difficult or discourage a change in control of the Company. The distribution of Rights and certain aspects of the foregoing provisions in the Company's Restated Certificate of Incorporation and Amended and Restated By-Laws were designed to afford the Board of Directors the opportunity to evaluate the terms of a takeover attempt without haste or undue pressure, advise stockholders of its findings, and to negotiate to protect the interests of all stockholders. See "Risk Factors--Impediments to Changes in Control."

LIMITATION OF DIRECTORS' LIABILITY

The Company's Restated Certificate of Incorporation includes provisions (i) to eliminate the personal liability of the Company's directors to the Company or its stockholders for monetary damages resulting from breaches of their fiduciary duty (subject to certain exceptions, such as breach of the duty of loyalty to the Company or its stockholders) and (ii) to permit the Company to indemnify its directors and officers to the fullest extent permitted by law. The Company's Amended and Restated By-Laws include provisions for mandatory indemnification of its officers and directors provided certain conditions are met.

The Company has directors' and officers' liability insurance.

UNDERWRITING

Montgomery Securities, Oppenheimer & Co., Inc. and Adams, Harkness & Hill, Inc. (the "Underwriters") have agreed, subject to the terms and conditions set forth in the underwriting agreement (the "Underwriting Agreement"), to purchase from the Company the number of shares of Common Stock indicated below, opposite their respective names, at the public offering price less the underwriting discount set forth on the cover page of this Prospectus. The Underwriting Agreement provides that the obligations of the Underwriters are subject to certain conditions precedent and that the Underwriters are committed to purchase all of such shares if any are purchased.

TOTAL	2,000,000
Adams, Harkness & Hill, Inc	
Oppenheimer & Co., Inc	
Montgomery Securities	
Underwriters	of Shares
	Number

The Underwriters have advised the Company that they propose initially to offer the shares of Common Stock to the public on the terms set forth on the cover page of this Prospectus. The Underwriters may allow selected dealers a concession of not more than \$ per share; and the Underwriters may allow, and such dealers may reallow, a concession of not more than \$ per share to certain other dealers. After the offering, the offering price and other selling terms may be changed by the Underwriters. The Common Stock is offered subject to receipt and acceptance by the Underwriters and to certain other conditions, including the right to reject orders in whole or in part.

The Company has granted an option to the Underwriters, exercisable during the 30-day period after the date of this Prospectus, to purchase up to a maximum of 300,000 additional shares of Common Stock solely to cover overallotments, if any, at the same price per share as the initial 2,000,000 shares to be purchased by the Underwriters. To the extent that the Underwriters exercise this option, the Underwriters will be committed, subject to certain conditions, to purchase such additional shares in approximately the same proportion as set forth in the above table. The Underwriters may purchase such shares only to cover over-allotments made in connection with this offering.

The Underwriting Agreement provides that the Company will indemnify the Underwriters against certain liabilities, including civil liabilities under the Securities Act, or will contribute to payments the Underwriters may be required to make in respect thereof.

All of the directors and executive officers of the Company, holding an aggregate of 497,692 shares of Common Stock (including 396,400 shares of Common Stock issuable under stock options that are or will become vested as of 90 days from the date of this Prospectus), have agreed that they will not, without the prior written consent of Montgomery Securities, directly or indirectly, offer, sell, contract to sell, make any short sale, pledge, establish an open "put equivalent position" within the meaning of Rule 16a-1(h) under the Exchange Act, or otherwise dispose of any shares of Common Stock, options to acquire shares of Common Stock or any securities convertible or exchangeable for shares of Common Stock, or publicly announce the intention to do any of the foregoing, for a period of 90 days after the day on which the registration statement including this Prospectus becomes effective by order of the Securities and Exchange Commission ("Effective Date"). In addition, the Company has agreed in the Underwriting Agreement that, without the prior written consent of Montgomery Securities, it will not issue, offer, sell, or grant shares of Common Stock or options to purchase such shares (other than options or shares granted or issued pursuant to the Company's 1986 Long-Term Incentive Plan, Savings and Retirement Plan, 1994 Non-Qualified Stock Option Plan for Non-Employee Directors, Employee Stock Purchase Plan) or otherwise dispose of the Company's equity securities, or any other securities convertible into or exchangeable for the Company's Common Stock or other equity securities for a period of 90 days after the first date that any shares of Common Stock are released for sale in the offering.

LEGAL MATTERS

The validity of the securities offered by the Company hereby has been passed upon for the Company by Brown, Rudnick, Freed & Gesmer, Boston, Massachusetts. A member of such firm is the Secretary of the Company and beneficially owns a nominal number of shares of Common Stock. Certain legal matters in connection with the Common Stock offered hereby will be passed upon for the Underwriters by Foley, Hoag & Eliot, Boston, Massachusetts.

EXPERTS

The consolidated financial statements and schedules of Alpha Industries, Inc. and subsidiaries as of April 2, 1995 and April 3, 1994, and for each of the years in the three-year period ended April 2, 1995, have been incorporated by reference herein and in the registration statement to which this Prospectus relates in reliance upon the report of KPMG Peat Marwick LLP, independent certified public accountants, and upon the authority of said firm as experts in accounting and auditing. The report of KPMG Peat Marwick LLP refers to the adoption of Financial Accounting Standard Board's Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes" in fiscal 1994.

There is a collage of photographs showing a pager, a cellular telephone in use, a global positioning device in use and a number of the Company's products, including an antenna, component, MIMICs, semiconductors and ceramic material.

No dealer, sales representative or any other person has been authorized to give any information or make any representations other than those contained in this Prospectus in connection with the offering described herein, and, if given or made, such information or representations must not be relied upon as having been authorized by the Company or any of the Underwriters. This Prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities other than the shares of Common Stock to which it relates, or an offer to, or solicitation of, any person in any jurisdiction where such offer or solicitation would be unlawful. Neither the delivery of this Prospectus nor any sale made hereunder shall, under any circumstances, create an implication that there has been no change in the affairs of the Company or that information contained herein is correct as of any time subsequent to the date hereof.

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2,000,000 SHARES

LOGO ALPHA INDUSTRIES

COMMON STOCK

PROSPECTUS

Montgomery Securities

Oppenheimer & Co., Inc.

Adams, Harkness & Hill, Inc.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

SEC Registration Fee	,
NASD Filing Fee	,
American Stock Exchange Listing Fee	17,500
Blue Sky Fees and Expenses	
Transfer Agent and Registrar Fees	5,000*
Accounting Fees and Expenses	20,000*
Legal Fees and Expenses	250,000*
Printing and Engraving	100,000*
Miscellaneous	15,982*
TOTAL	450,000*
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ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Article Tenth of the Company's Restated Certificate of Incorporation eliminates the personal liability of directors to the Company or its stockholders for monetary damages for breaches of their fiduciary duty (subject to certain exceptions, such as breaches of the duty of loyalty to the Company or its stockholders), and provides that the Company may indemnify its officers and directors to the full extent permitted by law. The Company's Amended and Restated By-Laws include provisions for mandatory indemnification of its 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.

Reference is hereby made to the caption "Description of Capital Stock and Other Matters--Limitation of Directors' Liability" in the Prospectus, which is a part of this Registration Statement.

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

Reference is hereby made to Section 10 of the Underwriting Agreement between the Company and the Underwriters, filed as Exhibit 1(a) to this Registration Statement, for a description of indemnification arrangements between the Company and the Underwriter.

ITEM 16. EXHIBITS

See Exhibit Index following signature page.

ITEM 17. UNDERTAKINGS

- (a) The undersigned Registrant hereby undertakes:
- (1) That, 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 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

^{*} Estimated

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;

- (2) That, 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 of 1933 shall be deemed to be part of this Registration Statement as of the time it was declared effective;
- (3) That, 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.
- (b) 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 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.

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 OCTOBER 26, 1995.

Alpha Industries, Inc.

By:	/s/ Martin J. Reid	
Martin J	. Reid,	
Drasidant	t	

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.

SIGNATURES	TITLE	DATE	
/s/ George S. Kariotis		October 26, 1995	
GEORGE S. KARIOTIS			
/s/ Martin J. Reid		October 26, 1995	
MARTIN J. REID	and Director (Principal Executive Officer)		
/s/ David J. Aldrich	Vice President,	October 26, 1995	
DAVID J. ALDRICH	Chief Financial Officer (Principal Financial Officer)		
/s/ Paul E. Vincent	Controller (Chief	October 26, 1995	
	Officer)	1000	
/s/ Arthur Pappas	Director	October 26, 1995	
ARTHUR PAPPAS			
/s/ Raymond Shamie	Director	October 26, 1995	
RAYMOND SHAMIE			
/s/ Sidney Topol	Director	October 26, 1995	
SIDNEY TOPOL			
/s/ Charles A. Zraket	Director	October 26, 1995	
CHARLES A. ZRAKET			

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT EACH PERSON WHOSE SIGNATURE APPEARS BELOW CONSTITUTES AND APPOINTS GEORGE S. KARIOTIS, MARTIN J. REID AND DAVID J. ALDRICH, AND EACH OF THEM (WITH FULL POWER TO EACH OF THEM TO ACT ALONE), 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, WITH THE SECURITIES AND EXCHANGE COMMISSION, GRANTING UNTO SAID 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.

SIGNATURES	TITLE	DATE
/s/ George S. KariotisGEORGE S. KARIOTIS		October 26, 1995
/s/ Martin J. Reid MARTIN J. REID	President, Chief Executive Officer and Director (Principal Executive Officer)	October 26, 1995
/s/ David J. AldrichDAVID J. ALDRICH	Vice President, Treasurer and Chief Financial Officer (Principal Financial Officer)	October 26, 1995
/s/ Paul E. Vincent PAUL E. VINCENT	Controller (Chief Accounting Officer)	October 26, 1995
/s/ Arthur Pappas ARTHUR PAPPAS		October 26, 1995
/s/ Raymond Shamie RAYMOND SHAMIE	Director 	October 26, 1995
/s/ Sidney TopolSIDNEY TOPOL		October 26, 1995
/s/ Charles A. Zraket CHARLES A. ZRAKET	Director 	October 26, 1995

EXHIBIT INDEX

EXHIBIT NUMBER		SEQUENTIAL PAGE NO.
1(a) 3(a) 3(b)	Form of Underwriting Agreement. Restated Certificate of Incorporation of the Registrant. Amended and Restated By-Laws of the Registrant (filed as	
4(a)	Exhibit 3(b) to the Registrant's Annual Report on Form 10-K for the year ended March 29, 1992). Specimen Certificate of Common Stock.	*
4(b)	Amended and Restated Rights Agreement dated as of November 24, 1986, as amended and restated July 3, 1990 and as further amended September 9, 1990 and September 24, 1990 between Registrant and The First National Bank of Boston, as Rights Agent. The July 3, 1990 restatement and the September 9, 1990 and September 24, 1990 amendments were filed as Exhibit 4 to the Current Report on Form 8-K dated July 3, 1990 and Exhibits 4(a) and 4(b) to the Current Report on Form 8-K dated September 18, 1990, respectively.	*
4(c)	Stock Purchase Warrant for 50,000 shares of the Registrant's Common Stock issued to Silicon Valley Bank as of April 1, 1994 (Filed as Exhibit 4(i) to the Quarterly Report on Form 10-Q for the quarter ended July 3, 1994).	*
5	Legal Opinion of Brown, Rudnick, Freed & Gesmer regarding legality of Common Stock.	
23(a)	Consent of Brown, Rudnick, Freed & Gesmer (contained in Exhibit 5).	
23(b) 24	Consent of Independent Auditors. Power of Attorney (contained in Part II of Registration Statement)	

* Not filed herewith, incorporated by reference to documents previously filed with the Commission.

DESCRIPTION OF GRAPHIC MATERIAL

Page 24

Bar chart, entitled "Commercial Applications," illustrating various commercial wireless communications applications and the radio frequencies assigned to them.

Page 27

Diagram entitled "Typical Wireless Communications Handsets" depicting the basic circuitry of a typical wireless communications handset, indicating those products or components that are supplied by the Company.

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Chart illustrating the principal wireless communications applications in which the Company's products are used, indicating which product line is applicable to each type of application.

2,000,000 SHARES

ALPHA INDUSTRIES, INC.

COMMON STOCK

UNDERWRITING AGREEMENT

_____, 1995

Montgomery Securities
Oppenheimer & Co., Inc.
Adams, Harkness & Hill, Inc.
As Representatives of the several Underwriters
c/o Montgomery Securities
600 Montgomery Street
San Francisco, California 94111

Ladies and Gentlemen:

SECTION 1. INTRODUCTORY. Alpha Industries, Inc., a Delaware corporation (the "Company), proposes to issue and sell 2,000,000 shares of its authorized but unissued Common Stock, \$.25 par value per share (the "Common Stock"), to the several underwriters named in Schedule A hereto (the "Underwriters"), for which you are acting as representatives (the "Representatives"). Said aggregate of 2,000,000 shares are herein called the "Firm Common Shares." In addition, the Company proposes to grant to the Underwriters an option to purchase up to 300,000 additional shares of Common Stock (the "Optional Common Shares"), as provided in Section 4. The Firm Common Shares and, to the extent such option is exercised, the Optional Common Shares are hereinafter collectively referred to as the "Common Shares."

The Underwriters have advised the Company that the Underwriters propose to make a public offering of their respective portions of the Common Shares on the effective date of the registration statement hereinafter referred to, or as soon thereafter as in the Representatives' judgment is advisable.

The Company hereby confirms its agreement with respect to the purchase of the Common Shares by the Underwriters as follows:

SECTION 2. REPRESENTATIONS AND WARRANTIES OF THE COMPANY. The Company hereby represents and warrants to the several Underwriters that:

(a) A registration statement on Form S-3 (File No. 33-_ respect to the Common Shares has been prepared by the Company in conformity with the requirements of the Securities Act of 1933, as amended (the "Act") and the rules and regulations (the "Rules and Regulations") of the Securities and Exchange Commission (the "Commission") thereunder, and has been filed with the Commission. The Company has prepared and has filed or proposes to file prior to the effective date of such registration statement an amendment or amendments to such registration statement, which amendment or amendments have been or will be similarly prepared. There have been delivered to the Representatives two signed copies of such registration statement and amendments, together with two copies of each exhibit filed therewith. Conformed copies of such registration statement and amendments (but without exhibits) and copies of the related preliminary prospectus have been delivered to the Representatives in such reasonable quantities as the Representatives have requested for each of the Underwriters. The Company will next file with the Commission one of the following: (i) prior to effectiveness of such registration statement, a further amendment thereto, including the form of final prospectus, (ii) a final prospectus in accordance with Rules 430A and 424(b) of the Rules and Regulations, or (iii) a term sheet (the "Term Sheet") as described in and in accordance with Rules 434 and 424(b) of the Rules and Regulations. As filed, the final prospectus, if one is used, or the Term Sheet and Preliminary Prospectus (as hereinafter defined), if a final prospectus is not used, shall include all Rule 430A Information (as hereinafter defined) and, except to the extent that the Representatives shall agree in writing to a modification, shall be in all substantive respects in the form furnished to the Representatives prior to the date and time that this Agreement was executed and delivered by the parties hereto, or, to the extent not completed at such date and time, shall contain only such specific additional information and other changes (beyond that contained in the latest Preliminary Prospectus, as hereinafter defined) as the Company shall have previously advised the Representatives in writing would be included or made therein.

The term "Registration Statement" as used in this Agreement shall mean such registration statement at the time such registration statement becomes effective and, in the event any post-effective amendment thereto becomes effective prior to the First Closing Date (as hereinafter defined), shall also mean such registration statement as so amended; provided, however, that such term shall also include (i) all Rule 430A Information deemed to be included in such registration statement at the time such registration statement becomes effective as provided by Rule 430A of the Rules and Regulations, and (ii) a registration statement, if any, filed pursuant to Rule 426(b) of the Rules and Regulations relating to the Common Shares. The term "Preliminary Prospectus" shall mean any preliminary prospectus referred to in the preceding paragraph and any preliminary prospectus included in the Registration Statement at the time it becomes effective that omits Rule 430A Information. The term "Prospectus" as used in this Agreement shall mean either (i) the prospectus relating to the Common Shares in the form in which it is first filed with the Commission pursuant to Rule 424(b) of the Rules and Regulations or, (ii) if a Term Sheet is not used and no filing pursuant to Rule 424(b) of the Rules and Regulations is required, the form of final prospectus included in the Registration Statement at the time such registration statement becomes effective, or (iii) if a Term Sheet is used, the Term Sheet in the form in which it is first filed with the Commission pursuant to Rule 424(b) of the Rules and Regulations, together with the Preliminary Prospectus included in the Registration Statement at the time it become effective. The term "Rule 430A Information" shall mean information with respect to the Common Shares and the offering thereof permitted to be omitted from the Registration Statement when it becomes effective pursuant to Rule 430A of the Rules and Regulations. Any reference herein to any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the documents incorporated by reference

therein pursuant to Form S-3 under the Act, as of the date of such Preliminary Prospectus or Prospectus, as the case may be.

- (b) The Commission has not issued any order preventing or suspending the use of any Preliminary Prospectus, and each Preliminary Prospectus has conformed in all material respects to the requirements of the Act and the Rules and Regulations and, as of its date, has not included any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; and at the time the Registration Statement becomes effective, and at all times subsequent thereto up to and including each Closing Date hereinafter mentioned, the Registration Statement and the Prospectus, and any amendments or supplements thereto, will contain all material statements and information required to be included therein by the Act and the Rules and Regulations and will in all material respects conform to the requirements of the Act and the Rules and Regulations, and neither the Registration Statement nor the Prospectus, nor any amendment or supplement thereto, will include any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; provided, however, no representation or warranty contained in this Section 2(b) shall be applicable to information contained in or omitted from any Preliminary Prospectus, the Registration Statement, the Prospectus or any such amendment or supplement in reliance upon and in conformity with written information furnished to the Company by or on behalf of any Underwriter, directly or through the Representatives, specifically for use in the preparation thereof. The documents incorporated by reference in the Prospectus, when they were filed with the Commission, conformed in all material respects to the requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules and regulations of the Commission thereunder, and none of such documents contained an 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.
- (c) The Company does not own or control, directly or indirectly, any corporation, association or other entity other than the subsidiaries listed in Exhibit 21 to the Annual Report on Form 10-K of the Company for the fiscal year ended April 2, 1995. The Company and each of its subsidiaries have been duly incorporated and are validly existing as corporations in good standing under the laws of their respective jurisdictions of incorporation, with full power and authority (corporate and other) to own and lease their properties and conduct their respective businesses as described in the Prospectus; the Company owns all of the outstanding capital stock of its subsidiaries free and clear of all claims, liens, charges and encumbrances, except that Trans-Tech, Inc. owns, free and clear of all claims, liens, charges and encumbrances, certain of the outstanding shares of capital stock of Trans-Tech Europe SARL; the Company and each of its subsidiaries are in possession of and operating in compliance with all authorizations, licenses, permits, consents, certificates and orders material to the conduct of their respective businesses, all of which are valid and in full force and effect; the Company and each of its subsidiaries are duly qualified to do business and in good standing as foreign corporations in each jurisdiction in which the ownership or leasing of properties or the conduct of their respective businesses requires such qualification, except for jurisdictions in which the failure to so qualify would not have a material adverse effect on the Company or the subsidiary; and no proceeding has been instituted in any such jurisdiction revoking, limiting or curtailing, or seeking to revoke, limit or curtail, such power and authority or qualification.
- (d) The Company has an authorized and outstanding capital stock as set forth under the heading "Capitalization" in the Prospectus; the issued and outstanding shares of Common Stock have been duly authorized and validly issued, are fully paid and nonassessable, are duly listed on the American Stock Exchange, have been issued in compliance with all federal and state securities laws,

were not issued in violation of or subject to any preemptive rights or other rights to subscribe for or purchase securities, and conform to the description thereof contained in the Prospectus. All issued and outstanding shares of capital stock of each subsidiary of the Company have been duly authorized and validly issued and are fully paid and nonassessable. Except as disclosed in or contemplated by the Prospectus and the financial statements of the Company, and the related notes thereto, included or incorporated by reference in the Prospectus, neither the Company nor any subsidiary has outstanding any options to purchase, or any preemptive rights or other rights to subscribe for or to purchase, any securities or obligations convertible into, or any contracts or commitments to issue or sell, shares of its capital stock or any such options, rights, convertible securities or obligations.

- (e) The Common Shares to be sold by the Company have been duly authorized and, when issued, delivered and paid for in the manner set forth in this Agreement, will be duly authorized, validly issued, fully paid and nonassessable, and will conform to the description thereof contained in the Prospectus. No preemptive rights or other rights to subscribe for or purchase exist with respect to the issuance and sale of the Common Shares by the Company pursuant to this Agreement. No stockholder of the Company has any right which has not been waived to require the Company to register the sale of any shares owned by such stockholder under the Act in the public offering contemplated by this Agreement. No further approval or authority of the stockholders or the Board of Directors of the Company will be required for the issuance and sale of the Common Shares to be sold by the Company as contemplated herein.
- (f) The Company has full legal right, power and authority to enter into this Agreement and perform the transactions contemplated hereby. This Agreement has been duly authorized, executed and delivered by the Company and constitutes a valid and binding obligation of the Company in accordance with its terms. The making and performance of this Agreement by the Company and the consummation of the transactions herein contemplated will not violate any provisions of the certificate of incorporation or bylaws, or other organizational documents, of the Company or any of its subsidiaries, and will not conflict with, result in the breach or violation of, or constitute, either by itself or upon notice or the passage of time or both, a default under any material agreement, mortgage, deed of trust, lease, franchise, license, indenture, permit or other instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries or any of its respective properties may be bound or affected, any statute or any authorization, judgment, decree, order, rule or regulation of any court or any regulatory body, administrative agency or other governmental body applicable to the Company or any of its subsidiaries or any of their respective properties. No consent, approval, authorization or other order of any court, regulatory body, administrative agency or other governmental body is required for the execution and delivery of this Agreement or the consummation of the transactions contemplated by this Agreement, except for compliance with the Act, the Blue Sky and state securities laws of jurisdictions of the United States and provincial securities laws of jurisdictions of Canada (collectively, "Blue Sky Laws") applicable to the public offering of the Common Shares by the several Underwriters and the clearance of such offering with the National Association of Securities Dealers, Inc. (the "NASD").
- (g) KPMG Peat Marwick LLP, who have expressed their opinion with respect to the financial statements incorporated by reference in the Prospectus and the Registration Statement, are independent accountants as required by the Act and the Rules and Regulations.
- (h) The consolidated financial statements of the Company and its subsidiaries, and the related notes thereto, incorporated by reference in the Registration Statement and the Prospectus present fairly the financial position of the Company and its subsidiaries as of the respective dates of such

financial statements, and the results of operations and changes in financial position of the Company and its subsidiaries for the respective periods covered thereby. Such statements and related notes have been prepared in accordance with generally accepted accounting principles applied on a consistent basis as certified by KPMG Peat Marwick LLP. No other financial statements or schedules are required to be included or incorporated by reference in the Registration Statement. The selected financial data set forth in the Prospectus under the captions "Capitalization" and "Selected Financial Data" fairly present the information set forth therein on the basis stated in the Registration Statement.

- (i) Except as disclosed in the Prospectus, and except as to defaults which individually or in the aggregate would not be material to the Company, neither the Company nor any of its subsidiaries is in violation or default of any provision of its certificate of incorporation or bylaws, or other organizational documents, or is in breach of or default with respect to any provision of any agreement, judgment, decree, order, mortgage, deed of trust, lease, franchise, license, indenture, permit or other instrument to which it is a party or by which it or any of its properties are bound; and there does not exist any state of facts which constitutes an event of default on the part of the Company or any such subsidiary as defined in such documents or which, with notice or lapse of time or both, would constitute such an event of default.
- (j) There are no contracts or other documents required to be described in the Registration Statement or to be filed as exhibits to the Registration Statement by the Act or by the Rules and Regulations which have not been described or filed as required. The descriptions of contracts in the Prospectus are accurate and complete; all such contracts are in full force and effect on the date hereof; and neither the Company nor any of its subsidiaries, nor to the best of the Company's knowledge, any other party is in breach of or default under any of such contracts.
- (k) There are no legal or governmental actions, suits or proceedings pending or, to the best of the Company's knowledge, threatened to which the Company or any of its subsidiaries is or may be a party or of which property owned or leased by the Company or any of its subsidiaries is or may be the subject, or related to environmental or discrimination matters, which actions, suits or proceedings might, individually or in the aggregate, prevent or adversely affect the transactions contemplated by this Agreement or have a material adverse effect on the condition (financial or otherwise), properties, business, results of operations or prospects of the Company and its subsidiaries, taken as a whole (a "Material Adverse Effect"); and no labor disturbance by the employees of the Company or any of its subsidiaries exists or, to the best of the Company's knowledge, is imminent which might be expected to have a Material Adverse Effect. Neither the Company nor any of its subsidiaries is a party or subject to the provisions of any material injunction, judgment, decree or order of any court, regulatory body, administrative agency or other governmental body.
- (1) The Company or the applicable subsidiary has good and marketable title to all the properties and assets reflected as owned in the financial statements hereinabove described (or elsewhere in the Prospectus), subject to no lien, mortgage, pledge, charge or encumbrance of any kind except (i) those, if any, reflected in such financial statements (or elsewhere in the Prospectus), or (ii) those which are not material in amount and do not adversely affect the use made and proposed to be made of such property by the Company and its subsidiaries. The Company or the applicable subsidiary holds its leased properties under valid and binding leases, with such exceptions as are not materially significant in relation to the business of the Company. Except as disclosed in the Prospectus, the Company owns or leases all such properties as are necessary to its operations as now conducted or as proposed to be conducted.

- (m) Since the respective dates as of which information is given in the Registration Statement and Prospectus, and except as described in or specifically contemplated by the Prospectus: (i) the Company and its subsidiaries have not incurred any material liabilities or obligations, indirect, direct or contingent, or entered into any material agreement or other transaction which is not in the ordinary course of business or which could result in a material reduction in the future earnings of the Company and its subsidiaries, taken as a whole; (ii) the Company and its subsidiaries have not sustained any material loss or interference with their respective businesses or properties from fire, flood, windstorm, accident or other calamity, whether or not covered by insurance; (iii) the Company has not paid or declared any dividends or other distributions with respect to its capital stock and the Company and its subsidiaries are not in default in the payment of principal or interest on any outstanding debt obligations; (iv) there has not been any change in the capital stock (other than upon the sale of the Common Shares hereunder or upon the exercise of outstanding stock options) or indebtedness material to the Company and its subsidiaries, taken as a whole (other than in the ordinary course of business); and (v) there has not been any material adverse change in the condition (financial or otherwise), business, properties, results of operations or prospects of the Company and its subsidiaries, taken as a whole.
- (n) Except as disclosed in the Prospectus, (i) the Company and its subsidiaries own or have the right to use (as currently used), free and clear of all material liens, charges, claims, encumbrances, pledges, security interests, defects or other like material restrictions of any kind whatsoever, all patents, patent applications, trademarks, service marks, trade names, mask works and copyrights, any licenses and rights to the foregoing, and any registrations of any of the foregoing, used in the conduct of their respective businesses as previously or presently conducted, or as proposed to be conducted (collectively, "Intellectual Property Rights"), without infringing upon or otherwise acting adversely to the right of any person or entity under or with respect to any of the foregoing, (ii) the invalidity of any patent, the expiration of any registration of any Intellectual Property Rights or any other loss of Intellectual Property Rights would not have a Material Adverse Effect, (iii) there is no claim being made or, to the best of the Company's knowledge, threatened against the Company or any of its subsidiaries regarding any of the Intellectual Property Rights that could have a Material Adverse Effect, and (iv) neither the Company nor any of its subsidiaries is obligated or under any liability whatsoever to make any payments by way of royalties, fees or otherwise to any owner or licensee of, or other claimant to, any patent, trademark, service mark, trade name, copyright, know-how, technology or other intangible asset, with respect to the use thereof or in connection with the conduct of its business or otherwise. The Company and each of its subsidiaries have the unrestricted right to use (as currently used) all trade secrets, know-how (including all other unpatented and unpatentable proprietary or confidential information, systems or procedures), inventions, designs, processes, works of authorship, computer programs, and technical data and information required for or material to the development, production, operation and sale of all services and products sold or proposed to be sold thereby, free and clear of, and without violating, any material right, lien or claim of others, including former employers of their respective employees.
- (o) The Company has not been advised, and has no reason to believe, that either it or any of its subsidiaries is not conducting business in compliance with all applicable laws, rules and regulations of the jurisdictions in which it is conducting business, including all applicable local, state and federal environmental laws and regulations, except where failure to be so in compliance would not have a Material Adverse Effect.
- (p) The Company and its subsidiaries have filed all necessary federal, state and foreign income and franchise tax returns and have paid all taxes shown as due thereon; and the Company

has no knowledge of any tax deficiency which has been or might be asserted or threatened against the Company or its subsidiaries which could have a Material Adverse Effect.

- (q) The Company is not an "investment company" within the meaning of the Investment Company Act of 1940, as amended.
- (r) The Company has not distributed and will not distribute prior to the First Closing Date any offering material in connection with the offering and sale of the Common Shares other than the Prospectus, the Registration Statement and the other materials permitted by the Act.
- (s) Each of the Company and its subsidiaries maintains insurance of the types and in the amounts generally deemed adequate for its business, including insurance covering real and personal property owned or leased by the Company and its subsidiaries against theft, damage, destruction, acts of vandalism and all other risks customarily insured against, all of which insurance is in full force and effect.
- (t) Neither the Company nor any of its subsidiaries has at any time during the last five years (i) made any unlawful contribution to any candidate for foreign office, or failed to disclose fully any contribution in violation of law, or (ii) made any payment to any federal or state governmental officer or official, or other person charged with similar public or quasi-public duties, other than payments required or permitted by the laws of the United States or any jurisdiction thereof.
- (u) The Company has not taken and will not take, directly or indirectly, any action designed to or that might be reasonably expected to cause or result in stabilization or manipulation of the price of the Common Stock to facilitate the sale or resale of the Common Shares.
- SECTION 3. REPRESENTATIONS AND WARRANTIES OF THE UNDERWRITERS. The Representatives, on behalf of the several Underwriters, represent and warrant to the Company that the information set forth in (i) the last paragraph of the cover page of the Prospectus and (ii) the second paragraph under "Underwriting" in the Prospectus was furnished to the Company by and on behalf of the Underwriters for use in connection with the preparation of the Registration Statement and the Prospectus and is correct in all material respects. The Representatives represent and warrant that they have been authorized by each of the other Underwriters as the Representatives to enter into this Agreement on its behalf and to act for it in the manner herein provided.
- SECTION 4. PURCHASE, SALE AND DELIVERY OF COMMON SHARES. On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company agrees to issue and sell the Firm Common Shares to the Underwriters. Each of the Underwriters agrees, severally and not jointly, to purchase from the Company the number of Firm Common Shares set forth opposite the name of such Underwriter in Schedule A hereto. The purchase price per share to be paid by the several Underwriters to the Company shall be equal to the initial price to the public per share less an amount per share equal to the per share underwriting discount. The initial price to the public, which shall be a fixed price, and the underwriting discount will be determined by separate agreement between the Company and the Underwriters in substantially the form set forth as Schedule B hereto. Such initial price shall not be higher than the last sale price of the Common Stock reported on the American Stock Exchange immediately prior to such determination.

Delivery of certificates for the Firm Common Shares to be purchased by the Underwriters shall be made at the offices of Montgomery Securities, 600 Montgomery Street, San Francisco, California and payment therefor shall be made at the offices of Brown, Rudnick, Freed & Gesmer, One Financial

Center, Boston, Massachusetts (or such other place as may be agreed upon by the Company and the Representatives), at such time and date, not later than the third (or, if the Firm Common Shares are priced, as contemplated by Rule 15c6-1(c) of the Exchange Act, after 4:30 P.M., Washington, D.C. time, the fourth) full business day following the first date that any of the Common Shares are released by the Representatives for sale to the public, as the Representatives shall designate by at least 48 hours prior notice to the Company (or at such other time and date, not later than one week after such third or fourth, as the case may be, full business day as may be agreed upon by the Company and the Representatives) (the "First Closing Date"); provided, however, that if the Prospectus is at any time prior to the First Closing Date recirculated to the public, the First Closing Date shall occur upon the later of the third or fourth, as the case may be, full business day following the first date that any of the Common Shares are released by the Representatives for sale to the public or the date that is 48 hours after the date that the Prospectus has been so recirculated.

Delivery of certificates for the Firm Common Shares shall be made by or on behalf of the Company to the Representatives, for the respective accounts of the Underwriters against payment by the Representatives, for the accounts of the several Underwriters, of the purchase price therefor by certified or official bank checks payable in next day funds to the order of the Company. The certificates for the Firm Common Shares shall be registered in such names and denominations as the Representatives shall have requested at least two full business days prior to the First Closing Date, and shall be made available for checking and packaging on the business day preceding the First Closing Date at a location in New York, New York, as may be designated by the Representatives. Time shall be of the essence, and delivery at the time and place specified in this Agreement is a further condition to the obligations of the Underwriters.

In addition, on the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company hereby grants an option to the several Underwriters to purchase, severally and not jointly, up to an aggregate of 300,000 Optional Common Shares at the purchase price per share to be paid for the Firm Common Shares, for use solely in covering any over-allotments made by the Representatives for the account of the Underwriters in the sale and distribution of the Firm Common The option granted hereunder may be exercised at any time (but not more than once) within thirty days after the first date that any of the Common Shares are released by the Representatives for sale to the public, upon notice by the Representatives to the Company setting forth the aggregate number of Optional Common Shares as to which the Underwriters are exercising the option, the names and denominations in which the certificates for such shares are to be registered and the time and place at which such certificates will be delivered. Such time of delivery (which may not be earlier than the First Closing Date), being herein referred to as the "Second Closing Date," shall be determined by the Representatives, but if at any time other than the First Closing Date shall not be earlier than three nor later than five full business days after delivery of such notice of exercise. The number of Optional Common Shares to be purchased by each Underwriter shall be determined by multiplying the number of Optional Common Shares pursuant to such notice of exercise by a fraction, the numerator of which is the number of Firm Common Shares to be purchased by such Underwriter as set forth opposite its name in Schedule A hereto and the denominator of which is 2,000,000 (subject to such adjustments to eliminate any fractional share purchases as the Representatives in their discretion may make). Certificates for the Optional Common Shares will be made available for checking and packaging on the business day preceding the Second Closing Date at a location in New York, New York, as may be designated by the Representatives. The manner of payment for and delivery of, the Optional Common Shares shall be the same as for the Firm Common Shares as specified in the two preceding paragraphs. At any time before lapse of the option, the Representatives may cancel such option by giving written notice of such cancellation to the Company.

The Representatives have advised the Company that each Underwriter has authorized the Representatives to accept delivery of its Common Shares, to make payment and to receipt therefor. You, individually and not as the Representatives of the Underwriters, may (but shall not be obligated to) make payment for any Common Shares to be purchased by any Underwriter whose funds shall not have been received by the Representatives by the First Closing Date or the Second Closing Date, as the case may be, for the account of such Underwriter, but any such payment shall not relieve such Underwriter from any of its obligations under this Agreement.

Subject to the terms and conditions hereof, the Underwriters propose to make a public offering of their respective portions of the Common Shares as soon after the effective date of the Registration Statement as in the judgment of the Representatives is advisable and at the public offering price set forth on the cover page of and on the terms set forth in the final prospectus, if one is used, or on the first page of the Term Sheet, if one is used.

SECTION 5. COVENANTS OF THE COMPANY. The Company covenants and agrees that:

- (a) The Company will use its best efforts to cause the Registration Statement and any amendment thereof, if not effective at the time and date that this Agreement is executed and delivered by the parties hereto, to become effective. If the Registration Statement has become or becomes effective pursuant to Rule 430A of the Rules and Regulations, or the filing of the Prospectus or the Term Sheet is otherwise required under Rule 424(b) of the Rules and Regulations, the Company will file the Prospectus or the Term Sheet, properly completed, pursuant to the applicable paragraph of Rule 424(b) of the Rules and Regulations within the time period prescribed and will provide evidence satisfactory to the Representatives of such timely filing. The Company will promptly advise the Representatives in writing (i) of the receipt of any comments of the Commission, (ii) of any request of the Commission for amendment of or supplement to the Registration Statement (either before or after it becomes effective), any Preliminary Prospectus or the Prospectus or for additional information, (iii) when the Registration Statement shall have become effective and (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or of the institution of any proceedings for that purpose. If the Commission shall enter any such stop order at any time, the Company will use its best efforts to obtain the lifting of such order at the earliest possible moment. The Company will not file any amendment or supplement to the Registration Statement (either before or after it becomes effective), any Preliminary Prospectus, the Term Sheet or the Prospectus of which the Representatives have not been furnished with a copy a reasonable time prior to such filing or to which the Representatives reasonably object or which is not in compliance with the Act and the Rules and Regulations.
- (b) The Company will prepare and file with the Commission, promptly upon the Representatives' reasonable request, any amendments or supplements to the Registration Statement or the Prospectus which in the Representatives' reasonable judgment may be necessary or advisable to enable the several Underwriters to continue the distribution of the Common Shares and will use its best efforts to cause the same to become effective as promptly as possible. The Company will fully and completely comply with the provisions of Rule 430A of the Rules and Regulations with respect to information omitted from the Registration Statement in reliance upon such Rule.
- (c) If at any time within the nine-month period referred to in Section 10(a)(3) of the Act during which a prospectus relating to the Common Shares is required to be delivered under the Act any event occurs, as a result of which the Prospectus, including any amendments or supplements, would include an untrue statement of a material fact, or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading, or if it is necessary at

any time to amend the Prospectus, including any amendments or supplements, to comply with the Act or the Rules and Regulations, the Company will promptly advise the Representatives thereof and will promptly prepare and file with the Commission, at its own expense, an amendment or supplement which will correct such statement or omission or an amendment or supplement which will effect such compliance and will use its best efforts to cause the same to become effective as soon as possible; and, in case any Underwriter is required to deliver a prospectus after such nine-month period, the Company upon request, but at the expense of such Underwriter, will promptly prepare such amendment or amendments to the Registration Statement and such Prospectus or Prospectuses as may be necessary to permit compliance with the requirements of Section 10(a)(3) of the Act.

- (d) As soon as practicable, but not later than 45 days after the end of the first quarter ending after one year following the "effective date of the Registration Statement" (as defined in Rule 158(c) of the Rules and Regulations), the Company will make generally available to its security holders an earnings statement (which need not be audited) covering a period of 12 consecutive months beginning after the effective date of the Registration Statement which will satisfy the provisions of the last paragraph of Section 11(a) of the Act.
- (e) During such period as a prospectus is required by law to be delivered in connection with sales by an Underwriter or dealer, the Company, at its expense, but only for the nine-month period referred to in Section 10(a)(3) of the Act, will furnish to the Representatives or mail to the Representatives' order copies of the Registration Statement, the Prospectus (including the Term Sheet), the Preliminary Prospectus and all amendments and supplements to any such documents in each case as soon as available and in such quantities as the Representatives may reasonably request, for the purposes contemplated by the Act.
- (f) The Company shall cooperate with the Representatives and Foley, Hoag & Eliot in order to qualify or register the Common Shares for sale under (or obtain exemptions from the application of) the Blue Sky Laws of such jurisdictions of the United States and Canada as the Representatives reasonably designate, will comply with such laws and will continue such qualifications, registrations and exemptions in effect so long as reasonably required for the distribution of the Common Shares. The Company shall not be required to qualify as a foreign corporation or to file a general consent to service of process in any such jurisdiction where it is not presently qualified or where it would be subject to taxation as a foreign corporation. The Company will advise the Representatives promptly of the suspension of the qualification or registration of (or any such exemption relating to) the Common Shares for offering, sale or trading in any jurisdiction or any initiation or threat of any proceeding for any such purpose, and in the event of the issuance of any order suspending such qualification, registration or exemption, the Company, with the Representatives' cooperation, will use its best efforts to obtain the withdrawal thereof.
- (g) During the period of five years hereafter, the Company will furnish to the Representatives and, upon request of the Representatives, to each of the other Underwriters: (i) as soon as practicable after the end of each fiscal year, copies of the Annual Report of the Company containing the balance sheet of the Company as of the close of such fiscal year and statements of income, stockholders' equity and cash flows for the year then ended and the opinion thereon of the Company's independent accountants; (ii) as soon as practicable after the filing thereof, copies of each proxy statement, Annual Report on Form 10-K, Quarterly Report on Form 10-Q, Current Report on Form 8-K or other report filed by the Company with the Commission, the American Stock Exchange or any other securities exchange, or any over-the-counter market; and (iii) as soon

as available, copies of any report or communication of the Company mailed generally to holders of Common Stock.

- (h) During the period of ninety days after the date of the Prospectus, without the prior written consent of Montgomery Securities (which consent may be withheld at the sole discretion of Montgomery Securities), the Company will not issue, offer, sell, grant options to purchase or otherwise dispose of any of the Company's equity securities or any other securities convertible into or exchangeable with its Common Stock or other equity security, other than (i) the issuance and sale of shares of Common Stock pursuant to outstanding stock options and warrants disclosed in the Prospectus, (ii) the issuance of options under the Alpha Industries, Inc. 1986 Long-Term Incentive Plan and the Alpha Industries, Inc. 1994 Non-Qualified Stock Option Plan for Non-Employee Directors, each as amended on the date hereof, and (iii) the issuance of shares of Common Stock under the Alpha Industries, Inc. Employee Stock Purchase Plan and the Alpha Industries, Inc. Savings and Retirement Plan, each as amended on the date hereof.
- (i) The Company will apply the net proceeds of the sale of the Common Shares sold by it substantially in accordance with its statements under the caption "Use of Proceeds" in the Prospectus.
- (j) The Company will use its best efforts to qualify or register its Common Stock for sale in non-issuer transactions under (or obtain exemptions from the application of) the Blue Sky Laws of the State of California (and thereby permit market making transactions and secondary trading in the Common Stock in California), will comply with such Blue Sky Laws and will continue such qualifications, registrations and exemptions in effect for a period of five years after the date hereof.
- (k) The Company will use its best efforts to list the Firm Common Shares and, to the extent issued, the Optional Common Shares on the American Stock Exchange.

The Representatives may, in their sole discretion, waive in writing the performance by the Company of any one or more of the foregoing covenants or extend the time for the performance of any of the foregoing covenants.

SECTION 6. PAYMENT OF EXPENSES. Whether or not the transactions contemplated hereunder are consummated or this Agreement becomes effective or is terminated, the Company agrees to pay all costs, fees and expenses incurred in connection with the performance of its obligations hereunder and in connection with the transactions contemplated hereby, including without limiting the generality of the foregoing, (i) all expenses incident to the issuance and delivery of the Common Shares (including all printing and engraving costs), (ii) all fees and expenses of the registrar and transfer agent of the Common Stock, (iii) all necessary issue, transfer and other stamp taxes in connection with the issuance and sale of the Common Shares to the Underwriters, (iv) all fees and expenses of the Company's counsel and the Company's independent accountants, (v) all costs and expenses incurred in connection with the preparation, printing, filing, shipping and distribution of the Registration Statement, each Preliminary Prospectus and the Prospectus (including the Term Sheet and all exhibits and financial statements) and all amendments and supplements provided for herein, this Agreement, the Montgomery Securities Master Agreement Among Underwriters, the Montgomery Securities Master Selected Dealers Agreement, any Underwriters' Questionnaire and any Underwriters' Power of Attorney, (vi) all filing fees, reasonable attorneys' fees and expenses incurred by the Company or the Underwriters in connection with qualifying or registering (or obtaining exemptions from the qualification or registration of) all or any part of the Common Shares for offer and sale under Blue Sky Laws, including all costs and expenses incurred in connection with the preparation, printing, filing, shipping and distribution of all preliminary and

supplemental memoranda relating to Blue Sky Laws, (vii) the filing fee of the NASD and the listing fee of the American Stock Exchange, and (viii) all other fees, costs and expenses referred to in Item 14 of the Registration Statement. Except as provided in this Section 6 and Sections 8 and 10, the Underwriters shall pay all of their own expenses, including the fees and disbursements of their counsel (excluding those relating to qualification, registration or exemption under the Blue Sky Laws and the Blue Sky memorandum referred to above).

SECTION 7. CONDITIONS OF THE OBLIGATIONS OF UNDERWRITERS. The obligations of the several Underwriters to purchase and pay for the Firm Common Shares on the First Closing Date and the Optional Common Shares on the Second Closing Date shall be subject to the accuracy of the representations and warranties on the part of the Company herein set forth as of the date hereof and as of the First Closing Date or the Second Closing Date, as the case may be, to the accuracy of the statements of Company officers made pursuant to the provisions hereof, to the performance by the Company of its obligations hereunder, and to the following additional conditions:

- (a) The Registration Statement shall have become effective not later than 5 P.M. (or, in the case of a registration statement filed pursuant to Rule 462(b) of the Rules and Regulations relating to the Common Shares, not later than 10 A.M.), Washington, D.C. time, on the date of this Agreement, or at such later time as shall have been consented to by the Representatives; if the filing of the Prospectus, or any supplement thereto, is required pursuant to Rule 424(b) of the Rules and Regulations, the Prospectus shall have been filed in the manner and within the time period required by Rule 424(b) of the Rules and Regulations; and prior to such Closing Date, no stop order suspending the effectiveness of the Registration Statement shall have been issued and no proceedings for that purpose shall have been instituted or shall be pending or, to the knowledge of the Company or the Representatives, shall be contemplated by the Commission; and any request of the Commission for inclusion of additional information in the Registration Statement, or otherwise, shall have been complied with to the Representatives' satisfaction.
- (b) The Representatives shall be satisfied that since the respective dates as of which information is given in the Registration Statement and Prospectus, (i) there shall not have been any change in the capital stock of the Company or any of its subsidiaries, other than (A) pursuant to the exercise of outstanding options and warrants disclosed in the Prospectus, (B) the issuance of Common Stock pursuant to options issued under the Alpha Industries, Inc. 1986 Long-Term Incentive Plan or the Alpha Industries, Inc. 1994 Non-Qualified Stock Option Plan for Non-Employee Directors, each as amended on the date hereof, or (C) shares of Common Stock issued under the Alpha Industries, Inc. Employee Stock Purchase Plan and the Alpha Industries, Inc. Savings and Retirement Plan, each as amended on the date hereof; (ii) there shall not have been any change in the indebtedness (other than in the ordinary course of business) of the Company or any of its subsidiaries that is material to the Company and its subsidiaries, taken as a whole; (iii) except as set forth or contemplated by the Registration Statement or the Prospectus, no material agreement or other transaction shall have been entered into by the Company or any of its subsidiaries, which is not in the ordinary course of business or which could result in a material reduction in the future earnings of the Company and its subsidiaries, taken as a whole; (iv) no loss or damage (whether or not insured) to the property of the Company or any of its subsidiaries shall have been sustained which has or could have a Material Adverse Effect, (v) no legal or governmental action, suit or proceeding affecting the Company or any of its subsidiaries which is material to the Company and its subsidiaries or which affects or may affect the transactions contemplated by this Agreement shall have been instituted or threatened and (vi) there shall not have been any material change in the condition (financial or otherwise), business, management, results of operations or prospects of the Company and its subsidiaries, taken as a whole, which makes it impractical or inadvisable in the

judgment of the Representatives to proceed with the public offering or purchase the Common Shares as contemplated hereby.

- (c) There shall have been furnished to the Representatives, on each Closing Date, in form and substance satisfactory to the Representatives, except as otherwise expressly provided below:
 - (i) An opinion of Brown, Rudnick, Freed & Gesmer, counsel for the Company, addressed to the Underwriters and dated the First Closing Date or the Second Closing Date, as the case may be, to the effect that:
 - (1) Each of the Company and its subsidiaries organized under the laws of states of the United States (the "U.S. Subsidiaries") has been duly incorporated and is validly existing as a corporation in good standing under the laws of its jurisdiction of incorporation, is duly qualified to do business as a foreign corporation and is in good standing in each of the jurisdictions listed therein, and has full corporate power and authority to own its properties and conduct its business as described in the Registration Statement.
 - (2) The authorized, issued and outstanding capital stock of the Company is as set forth under the caption "Capitalization" in the Prospectus; all necessary and proper corporate proceedings have been taken in order to authorize validly such authorized Common Stock; all outstanding shares of Common Stock have been duly and validly issued, are fully paid and nonassessable, were not issued in violation of or subject to any preemptive rights or other rights to subscribe for or purchase any securities, and conform to the description thereof contained in the Prospectus; without limiting the foregoing, there are no preemptive or other rights to subscribe for or purchase any of the Common Shares.
 - (3) All of the issued and outstanding shares of the U.S. Subsidiaries of the Company have been duly and validly authorized and issued, are fully paid and nonassessable and, to the best of such counsel's knowledge, are owned beneficially by the Company free and clear of all liens, encumbrances, equities, claims, security interests, voting trusts or other defects of title whatsoever.
 - (4) The certificates evidencing the Common Shares to be delivered hereunder are in due and proper form under law, and when duly countersigned by the Company's transfer agent and registrar, and delivered to the Representatives or upon the Representatives' order against payment of the agreed consideration therefor in accordance with the provisions of this Agreement, the Common Shares represented thereby will be duly authorized and validly issued, fully paid and nonassessable, will not have been issued in violation of or subject to any preemptive rights or other rights to subscribe for or purchase securities, and will conform in all respects to the description thereof contained in the Prospectus.
 - (5) To the best of such counsel's knowledge, there are no outstanding options, warrants or other rights calling for the issuance of, and no commitments, plans or arrangements to issue, any shares of capital stock of the Company or any security convertible into or exchangeable for capital stock of the Company, except (a) for options granted under the Alpha Industries, Inc. 1986 Long-Term Incentive Plan and the Alpha Industries, Inc. 1994 Non-Qualified Stock Option Plan for Non-Employee Directors,

- (C) as contemplated by the Alpha Industries, Inc. Employee Stock Purchase Plan, and (c) as disclosed in or specifically contemplated by the Prospectus.
- (6) The Registration Statement has become effective under the Act, and, to the best of such counsel's knowledge, no stop order suspending the effectiveness of the Registration Statement or preventing the use of the Prospectus has been issued and no proceedings for that purpose have been instituted or are pending or contemplated by the Commission; any required filing of the Prospectus and any supplement thereto pursuant to Rule 424(b) of the Rules and Regulations has been made in the manner and within the time period required by such Rule 424(b).
- amendment or supplement thereto (except for the financial statements and schedules and financial and statistical data included therein, as to which such counsel need express no opinion) comply as to form in all material respects with the requirements of the Act and the Rules and Regulations. To the best of such counsel's knowledge, there are no franchises, leases, contracts, agreements or documents of a character required to be disclosed in the Registration Statement or Prospectus or to be filed as exhibits to the Registration Statement which are not disclosed or filed, as required. To the best of such counsel's knowledge, there are no legal or governmental actions, suits or proceedings pending or threatened against the Company which are required to be described in the Prospectus which are not described as required.
- (8) The documents incorporated by reference in the Prospectus (except for any financial statements and schedules and financial and statistical data included in such documents, as to which such counsel need express no opinion), when they were filed with the Commission, complied as to form in all material respects with the requirements of the Exchange Act and the rules and regulations of the Commission thereunder.
- (9) The Company has the corporate power and authority to enter into this Agreement and to sell and deliver the Common Shares to the several Underwriters; this Agreement has been duly and validly authorized by all necessary corporate action by the Company, has been duly and validly executed and delivered by and on behalf of the Company, and is a valid and binding agreement of the Company in accordance with its terms; and no approval, authorization, order, consent, registration, filing, qualification, license or permit of or with any court, regulatory, administrative or other governmental body is required for the execution and delivery of this Agreement by the Company or the consummation of the transactions contemplated by this Agreement, except such as have been obtained and are in full force and effect under the Act and such as may be required under applicable Blue Sky Laws in connection with the purchase and distribution of the Common Shares by the Underwriters and the clearance of such offering with the NASD.
- (10) The execution and performance of this Agreement and the consummation of the transactions herein contemplated will not (a) conflict with, result in the breach of, or constitute, either by itself or upon notice or the passage of time or both, a default under, any of the agreements and other documents constituting exhibits to the Registration Statement, (b) violate any of the provisions of the certificate of incorporation or bylaws, or other organizational documents, of the Company or any of the U.S. Subsidiaries or (c) to the best of such counsel's knowledge, violate any federal or Massachusetts statute, rule or regulation or any judgment, decree or order of any court or governmental body

having jurisdiction over the Company or any of the U.S. Subsidiaries or any property of the Company or any of the U.S. Subsidiaries.

- (11) Neither the Company nor any of the U.S. Subsidiaries is in violation of its certificate of incorporation or bylaws, or other organizational documents, except where such default would not materially adversely affect the Company and the U.S. Subsidiaries, taken as a whole.
- (12) To the best of such counsel's knowledge, no holders of securities of the Company have rights which have not been waived to the registration of shares of Common Stock or other securities, because of the filing of the Registration Statement by the Company or the offering contemplated hereby.

In rendering such opinion, such counsel may rely as to matters of fact on certificates of officers of the Company and the U.S. Subsidiaries and of governmental officials, in which case their opinion is to state that they are so doing and copies of said certificates are to be attached to the opinion. Such counsel shall also include a statement, satisfactory in form and substance to you and to Foley, Hoag & Eliot, counsel for the Underwriters, to the effect that nothing has come to such counsel's attention that would lead such counsel to believe that (a) at the effective date of the Registration Statement, the Registration Statement contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary [in order] to make the statements therein not misleading or (b) either at the date thereof or at the applicable Closing Date, the Prospectus contained or contains any untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

- (ii) An opinion of counsel for Alpha Industries GmbH ("Alpha Germany"), which counsel shall be reasonably satisfactory to the Representatives, addressed to the Underwriters and dated the First Closing Date or the Second Closing Date, as the case may be, to the effect that:
 - (1) Alpha Germany has been duly incorporated and is validly existing as a corporation in good standing under the laws of Germany. Alpha Germany has the corporate power and authority to carry on its business in accordance with its charter or by-laws, or other organizational documents.
 - (2) All of the issued and outstanding shares of Alpha Germany have been duly and validly authorized and issued and are fully paid and are owned of record by the Company, to the knowledge of such counsel, free and clear of all liens, encumbrances, equities, claims, security interests, voting trusts or other defects of title whatsoever.
 - (3) Such counsel have not been consulted in connection with any pending or threatened material legal or governmental actions, suits or proceedings to which Alpha Germany is a party or of which any property of Alpha Germany is the subject.
 - (4) Alpha Germany is not in violation of its charter or by-laws, or other organizational documents.

In rendering such opinion, such counsel may rely as to matters of fact on certificates of officers of Alpha Germany and of governmental officials, in which case their opinion is to state that they are so doing and that copies of said certificates are attached to the opinion.

- (iii) An opinion of counsel for Alpha Industries Limited ("Alpha UK"), which counsel shall be reasonably satisfactory to the Representatives, addressed to the Underwriters and dated the First Closing Date or the Second Closing Date, as the case may be, to the effect that:
 - (1) Alpha UK is a company duly incorporated with limited liability under the laws of England and is validly existing thereunder. As at a specified date within three business days of the date of such opinion, Alpha UK was in good standing, which, for purposes of such opinion, shall mean that according to a certificate received from the Registrar of Companies dated as of such specified date Alpha UK has, according to the documents in the custody of the Registrar of Companies, been in continuous and unbroken existence since the date of its incorporation and there are no documents on the file of Alpha UK kept by the Registrar of Companies showing, nor is the Registrar of Companies aware of, any proceedings for the winding up or liquidation of Alpha UK or that Alpha UK is not still in operation.
 - (2) All of the issued shares in the share capital of Alpha UK have been duly and validly authorised and issued, and are fully paid and nonassessable. For the purposes of such opinion, "nonassessable" shall mean that the registered holders of the shares are not liable under English law, by virtue of their shareholding, for the payment of taxes, duties, wages or other amounts for which Alpha UK is liable. All of the issued shares of Alpha UK are owned directly by or on trust for the Company, to the knowledge of such counsel free and clear of all liens, incumbrances, equities or claims.
 - (3) Such counsel have not been consulted in connection with any pending or threatened material legal or governmental actions, suits or proceedings to which Alpha UK is a party or of which any property of Alpha UK is the subject.
 - (4) Alpha UK is not in violation of its charter or by-laws, or other organizational documents.

In rendering such opinion, such counsel may rely as to matters of fact on certificates of officers of Alpha UK and of governmental officials, in which case their opinion is to state that they are so doing and that copies of said certificates are attached to the opinion.

- (iv) An opinion of counsel for Trans-Tech Europe SARL ("Trans-Tech Europe"), which counsel shall be reasonably satisfactory to the Representatives, addressed to the Underwriters and dated the First Closing Date or the Second Closing Date, as the case may be, to the effect that:
 - (1) Trans-Tech Europe has been duly incorporated and is validly existing under the laws of France as a legal entity in the form of a societe anonyme. Trans-Tech Europe has the corporate power and authority to carry on its business in accordance with its Articles of Association.
 - (2) All of the issued and outstanding shares of Trans-Tech Europe have been duly and validly authorized and issued and are fully paid and are owned of record by the

Company (____ shares) and Trans-Tech, Inc. (___ shares), to the knowledge of such counsel, free and clear of all liens, encumbrances, equities, claims, security interests, voting trusts or other defects of title whatsoever.

- (3) Such counsel have not been consulted in connection with any pending or threatened material legal or governmental actions, suits or proceedings to which Trans-Tech Europe is a party or of which any property of Trans-Tech Europe is the subject.
- (4) Trans-Tech Europe is not in violation of its charter or bylaws, or other organizational documents.

In rendering such opinion, such counsel may rely as to matters of fact on certificates of officers of Trans-Tech Europe and of governmental officials, in which case their opinion is to state that they are so doing and that copies of said certificates are attached to the opinion.

- (v) Such opinion or opinions of Foley, Hoag & Eliot, counsel for the Underwriters, dated the First Closing Date or the Second Closing Date, as the case may be, with respect to the incorporation of the Company, the sufficiency of all corporate proceedings and other legal matters relating to this Agreement, the validity of the Common Shares, the Registration Statement and the Prospectus and other related matters as the Representatives may reasonably require, and the Company shall have furnished to such counsel such documents and shall have exhibited to them such papers and records as they may reasonably request for the purpose of enabling them to pass upon such matters. In connection with such opinions, such counsel may rely on representations or certificates of officers of the Company and its subsidiaries and of governmental officials.
- (vi) A certificate of the Company executed by the President and Chief Executive Officer and the Vice President, Chief Financial Officer and Treasurer of the Company, dated the First Closing Date or the Second Closing Date, as the case may be, to the effect that:
 - (1) The representations and warranties of the Company set forth in Section 2 of this Agreement are true and correct as of the date of this Agreement and as of the First Closing Date or the Second Closing Date, as the case may be, and the Company has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied on or prior to such Closing Date.
 - (2) The Commission has not issued any order preventing or suspending the use of the Prospectus or any Preliminary Prospectus filed as a part of the Registration Statement or any amendment thereto; no stop order suspending the effectiveness of the Registration Statement has been issued; and to the best of the knowledge of the respective signers, no proceedings for that purpose have been instituted or are pending or contemplated under the Act.
 - (3) Each of the respective signers of the certificate has carefully examined the Registration Statement and the Prospectus; in his opinion and to the best of his knowledge, the Registration Statement and the Prospectus and any amendments or supplements thereto contain all statements required to be stated therein regarding the Company and its subsidiaries; and neither the Registration Statement nor the Prospectus nor any amendment or supplement thereto includes any untrue statement of a material fact

or omits to state any material fact required to be stated therein or necessary to make the statements therein not misleading.

- (4) Since the initial date on which the Registration Statement was filed, no agreement, written or oral, transaction or event has occurred which should have been set forth in an amendment to the Registration Statement or in a supplement to or amendment of any prospectus which has not been disclosed in such a supplement or amendment.
- (5) Since the respective dates as of which information is given in the $\acute{\text{Registration}}$ Statement and the Prospectus, and except as disclosed in or contemplated by the Prospectus, there has not been any material adverse change or a development involving a material adverse change in the condition (financial or otherwise), business, properties, results of operations, management or prospects of the Company and its subsidiaries, taken as a whole; and no legal or governmental action, suit or proceeding is pending or threatened against the Company or any of its subsidiaries which is material to the Company and its subsidiaries, taken as a whole, whether or not arising from transactions in the ordinary course of business, or which may adversely affect the transactions contemplated by this Agreement. Since such dates and except as so disclosed, neither the Company nor any of its subsidiaries has entered into any agreement or other transaction which is not in the ordinary course of business or which could result in a material reduction in the future earnings of the Company and its subsidiaries, taken as a whole, or incurred any material liability or obligation, direct, contingent or indirect, made any change in its capital stock, made any material change in its short-term debt or funded debt or repurchased or otherwise acquired any of the Company's capital stock; and the Company has not declared or paid any dividend, or made any other distribution, upon its outstanding capital stock payable to stockholders of record on a date prior to the First Closing Date or Second Closing Date.
- (6) Since the respective dates as of which information is given in the Registration Statement and the Prospectus and except as disclosed in or contemplated by the Prospectus, the Company and its subsidiaries have not sustained a material loss or damage by strike, fire, flood, windstorm, accident or other calamity (whether or not insured).
- (7) Each of the respective signers of the certificate has carefully reviewed the requests for documents and other records submitted by Foley, Hoag & Eliot in connection with the public offering and sale of the Common Shares. The agreements, documents, records, instruments and other information supplied in response to such requests were when so supplied, and are as of the date hereof, accurate and complete in all material respects and represent all of the material agreements, documents, records, instruments and other information relating to the items called for by such requests.
- (vii) On the date before this Agreement is executed and also on the First Closing Date and the Second Closing Date a letter addressed to the Representatives, from KPMG Peat Marwick LLP, independent accountants, the first one to be dated the day before the date of this Agreement, the second one to be dated the First Closing Date and the third one (in the event of a Second Closing) to be dated the Second Closing Date, each in form and substance satisfactory to the Representatives.

(viii) On or before the First Closing Date, letters from each director and executive officer of the Company, in form and substance satisfactory to the Representatives, confirming that for a period of ninety days after the first date that any of the Common Shares are released by the Representatives for sale to the public, such person will not directly or indirectly sell or offer to sell or otherwise dispose of any shares of Common Stock or any right to acquire such shares without the prior written consent of Montgomery Securities, which consent may be withheld at the sole discretion of Montgomery Securities.

All such opinions, certificates, letters and documents shall be in compliance with the provisions hereof only if they are satisfactory to the Representatives and to Foley, Hoag & Eliot, counsel for the Underwriters. The Company shall furnish the Representatives with such manually signed or conformed copies of such opinions, certificates, letters and documents as the Representatives request. Any certificate signed by any officer of the Company and delivered to the Representatives or to counsel for the Underwriters shall be deemed to be a representation and warranty by the Company to the Underwriters as to the statements made therein.

If any condition to the Underwriters' obligations hereunder to be satisfied prior to or at the First Closing Date is not so satisfied, this Agreement at the Representatives' election will terminate upon notification by the Representatives to the Company without liability on the part of any Underwriter or the Company except for the expenses to be paid or reimbursed by the Company pursuant to Sections 6 and 8 and except to the extent provided in Section 10.

SECTION 8. REIMBURSEMENT OF UNDERWRITERS' EXPENSES. Notwithstanding any other provisions hereof, if this Agreement shall be terminated by the Representatives pursuant to Section 7, or if the sale to the Underwriters of the Common Shares at the First Closing is not consummated because of any refusal, inability or failure on the part of the Company to perform any agreement herein or to comply with any provision hereof, the Company agrees to reimburse the Representatives and the other Underwriters upon demand for all out-of-pocket expenses that shall have been reasonably incurred by the Representatives and them in connection with the proposed purchase and the sale of the Common Shares, including fees and disbursements of counsel, printing expenses, travel expenses, postage, telegraph charges and telephone charges relating directly to the offering contemplated by the Prospectus. Any such termination shall be without liability of any party to any other party except that the provisions of this Section 8 and Sections 6 and 10 shall at all times be effective and shall apply.

SECTION 9. EFFECTIVENESS OF REGISTRATION STATEMENT. The Representatives and the Company will use their respective best efforts to cause the Registration Statement to become effective, to prevent the issuance of any stop order suspending the effectiveness of the Registration Statement and, if such stop order be issued, to obtain as soon as possible the lifting thereof.

SECTION 10. 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 the Act against any losses, claims, damages, liabilities or expenses, joint or several, to which such Underwriter or such controlling person may become subject, under the Act, the Exchange Act, or other federal or state statutory law or regulation, or at common law or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of the Company), insofar as such losses, claims, damages, liabilities or expenses (or actions in respect thereof as contemplated below) arise out of or are based upon any untrue statement or alleged untrue statement of any material fact contained in the Registration Statement, any Preliminary Prospectus, the Prospectus, or any amendment or

supplement thereto, or arise out of or are based upon the omission or alleged omission to state in any of them a material fact required to be stated therein or necessary to make the statements in any of them not misleading, or arise out of or are based in whole or in part on any inaccuracy in the representations and warranties of the Company contained herein or any failure of the Company to perform its obligations hereunder or under law; and will reimburse each Underwriter and each such controlling person for any legal and other expenses as such expenses are reasonably incurred by such Underwriter or such controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action; provided, however, that the Company will not be liable in any such case to the extent that any such loss, claim, damage, liability or expense arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, any Preliminary Prospectus, the Prospectus or any amendment or supplement thereto in reliance upon and in conformity with the information furnished to the Company pursuant to Section 3. In addition to its other obligations under this Section 10(a), the Company agrees that, as an interim measure during the pendency of any claim, action, investigation, inquiry or other proceeding arising out of or based upon any statement or omission, or any alleged statement or omission, or any inaccuracy in the representations and warranties of the Company herein or failure to perform its obligations hereunder, all as described in this Section 10(a), it will reimburse each Underwriter on a quarterly basis for all reasonable legal or other expenses incurred in connection with investigating or defending any such claim, action, investigation, inquiry or other proceeding, notwithstanding the absence of a judicial determination as to the propriety and enforceability of the Company's obligation to reimburse each Underwriter for such expenses and the possibility that such payments might later be held to have been improper by a court of competent jurisdiction. To the extent that any such interim reimbursement payment is so held to have been improper, each Underwriter shall promptly return it to the Company together with interest, compounded daily, determined on the basis of the prime rate (or other commercial lending rate for borrowers of the highest credit standing) announced from time to time by Bank of America NT&SA, San Francisco, California (the "Prime Rate"). Any such interim reimbursement payments which are not made to an Underwriter within thirty days of a request for reimbursement, shall bear interest at the Prime Rate from the date of such request. This indemnity agreement will be in addition to any liability which the Company may otherwise have.

(b) Each Underwriter will severally indemnify and hold harmless the Company, each of its directors, each of its officers who signed the Registration Statement and each person, if any, who controls the Company within the meaning of the Act, against any losses, claims, damages, liabilities or expenses to which the Company, or any such director, officer or controlling person may become subject, under the Act, the Exchange Act, or other federal or state statutory law or regulation, or at common law or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of such Underwriter), insofar as such losses, claims, damages, liabilities or expenses (or actions in respect thereof as contemplated below) arise out of or are based upon any untrue or alleged untrue statement of any material fact contained in the Registration Statement, any Preliminary Prospectus, the Prospectus, or any amendment or supplement thereto, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, any Preliminary Prospectus, the Prospectus, or any amendment or supplement thereto, in reliance upon and in conformity with the information furnished to the Company pursuant to Section 3; and will reimburse the Company, or any such director, officer or controlling person for any legal and other expenses reasonably incurred by the Company, or any such director, officer or controlling person in connection with investigating,

defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action. In addition to its other obligations under this Section 10(b), each Underwriter severally agrees that, as an interim measure during the pendency of any claim, action, investigation, inquiry or other proceeding arising out of or based upon any statement or omission, or any alleged statement or omission, described in this Section 10(b) which relates to information furnished to the Company pursuant to Section 3, it will reimburse the Company (and, to the extent applicable, each officer, director, controlling person) on a quarterly basis for all reasonable legal or other expenses incurred in connection with investigating or defending any such claim, action, investigation, inquiry or other proceeding, notwithstanding the absence of a judicial determination as to the propriety and enforceability of the Underwriters' obligation to reimburse the Company (and, to the extent applicable, each officer, director or controlling person) for such expenses and the possibility that such payments might later be held to have been improper by a court of competent jurisdiction. To the extent that any such interim reimbursement payment is so held to have been improper, the Company (and, to the extent applicable, each officer, director or controlling person) shall promptly return it to the Underwriters together with interest, compounded daily, determined on the basis of the Prime Rate. Any such interim reimbursement payments which are not made to the Company within thirty days of a request for reimbursement shall bear interest at the Prime Rate from the date of such request. This indemnity agreement will be in addition to any liability which such Underwriter may otherwise have.

(c) Promptly after receipt by an indemnified party under this Section 10 of notice of the commencement of any action, such indemnified party will, if a claim in respect thereof is to be made against an indemnifying party under this Section 10, notify the indemnifying party in writing of the commencement thereof; but the omission so to notify the indemnifying party will not relieve it from any liability which it may have to any indemnified party for contribution or otherwise than under the indemnity agreement contained in this Section 10 or to the extent it is not prejudiced as a proximate result of such failure. In case any such action is brought against any indemnified party and such indemnified party seeks or intends to seek indemnity from an indemnifying party, the indemnifying party will be entitled to participate in, and, to the extent that it may wish, jointly with all other indemnifying parties similarly notified, to assume the defense thereof with counsel reasonably satisfactory to such indemnified party; provided, however, if the defendants in any such action include both the indemnified party and the indemnifying party and the indemnified party shall have reasonably concluded that there may be a conflict between the positions of the indemnifying party and the indemnified party in conducting the defense of any such action or that there may be legal defenses available to it and/or other indemnified parties which are different from or additional to those available to the indemnifying party, the indemnified party or parties shall have the right to select separate counsel to assume such legal defenses and to otherwise participate in the defense of such action on behalf of such indemnified party or parties. Upon receipt of notice from the indemnifying party to such indemnified party of its election so to assume the defense of such action and approval by the indemnified party of counsel, the indemnifying party will not be liable to such indemnified party under this Section 10 for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof unless (i) the indemnified party shall have employed such counsel in connection with the assumption of legal defenses in accordance with the proviso to the next preceding sentence (it being understood, however, that the indemnifying party shall not be liable for the expenses of more than one separate counsel, approved by the Representatives in the case of Section 10(b), representing the indemnified parties who are parties to such action) or (ii) the indemnifying party shall not have employed counsel reasonably satisfactory to the indemnified party to represent the indemnified party within a reasonable time after notice of commencement of the action, in each of which cases the fees and expenses of counsel shall be at the expense of the indemnifying party.

- (d) If the indemnification provided for in this Section 10 is required by its terms but is for any reason held to be unavailable to or otherwise insufficient to hold harmless an indemnified party under Section 10(a), (b) or (c) in respect of any losses, claims, damages, liabilities or expenses referred to herein, then each applicable indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of any losses, claims, damages, liabilities or expenses referred to herein (i) in such proportion as is appropriate to reflect the relative benefits received by the Company and the Underwriters from the offering of the Common Shares or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company and the Underwriters in connection with the statements or omissions or inaccuracies in the representations and warranties herein which resulted in such losses, claims, damages, liabilities or expenses, as well as any other relevant equitable considerations. The respective relative benefits received by the Company and the Underwriters shall be deemed to be in the same proportion, in the case of the Company, as the total price paid to the Company for the Common Shares sold by it to the Underwriters (net of underwriting commissions but before deducting expenses) and, in the case of the Underwriters, as the underwriting commissions received by them bears to the total of such amounts paid to the Company and received by the Underwriters as underwriting commissions. The relative fault of the Company and the Underwriters shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact or the inaccurate or the alleged inaccurate representation and/or warranty relates 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 amount paid or payable by a party as a result of the losses, claims, damages, liabilities and expenses referred to above shall be deemed to include, subject to the limitations set forth in Section 10(c), any legal or other fees or expenses reasonably incurred by such party in connection with investigating or defending any action or claim. The provisions set forth in Section 10(c) with respect to notice of commencement of any action shall apply if a claim for contribution is to be made under this Section 10(d); provided, however, that no additional notice shall be required with respect to any action for which notice has been given under Section 10(c) for purposes of indemnification. The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this Section 10 were determined solely 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 10, no Underwriter shall be required to contribute any amount in excess of the amount of the total underwriting commissions received by such Underwriter in connection with the Common Shares underwritten by it and distributed to the public. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations to contribute pursuant to this Section 10 are several in proportion to their respective underwriting commitments and not joint.
- (e) It is agreed that any controversy arising out of the operation of the interim reimbursement arrangements set forth in Sections 10(a) and (b), including the amounts of any requested reimbursement payments and the method of determining such amounts, shall be settled by arbitration conducted under the provisions of the Constitution and Rules of the Board of Governors of the New York Stock Exchange, Inc. or pursuant to the Code of Arbitration Procedure of the NASD. Any such arbitration must be commenced by service of a written demand for arbitration or written notice of intention to arbitrate, therein electing the arbitration tribunal. In the event the party demanding arbitration does not make such designation of an arbitration tribunal in such demand or notice, then

the party responding to said demand or notice is authorized to do so. Such an arbitration would be limited to the operation of the interim reimbursement provisions contained in Sections 10(a) and (b) and would not resolve the ultimate propriety or enforceability of the obligation to reimburse expenses which is created by the provisions of such Sections 10(a) and (b).

SECTION 11. DEFAULT OF UNDERWRITERS. It shall be a condition to this Agreement and the obligation of the Company to sell and deliver the Common Shares hereunder, and of each Underwriter to purchase the Common Shares in the manner as described herein, that, except as hereinafter in this paragraph provided, each of the Underwriters shall purchase and pay for all the Common Shares agreed to be purchased by such Underwriter hereunder upon tender to the Representatives of all such shares in accordance with the terms hereof. If any Underwriter or Underwriters default in their obligations to purchase Common Shares hereunder on either the First or Second Closing Date and the aggregate number of Common Shares which such defaulting Underwriter or Underwriters agreed but failed to purchase on such Closing Date does not exceed 10% of the total number of Common Shares which the Underwriters are obligated to purchase on such Closing Date, the non-defaulting Underwriters shall be obligated severally, in proportion to their respective commitments hereunder, to purchase the $\ensuremath{\mathsf{Common}}$ Shares which such defaulting Underwriters agreed but failed to purchase on such Closing Date. If any Underwriter or Underwriters so default and the aggregate number of Common Shares with respect to which such default occurs is more than the above percentage and arrangements satisfactory to the Representatives and the Company for the purchase of such Common Shares by other persons are not made within 48 hours after such default, this Agreement will terminate without liability on the part of any non-defaulting Underwriter or the Company except for the expenses to be paid by the Company pursuant to Section 6 and except to the extent provided in Section 10.

In the event that Common Shares to which a default relates are to be purchased by the non-defaulting Underwriters or by another party or parties, the Representatives or the Company shall have the right to postpone the First or Second Closing Date, as the case may be, for not more than five business days in order that the necessary changes in the Registration Statement, Prospectus and any other documents, as well as any other arrangements, may be effected. As used in this Agreement, the term "Underwriter" includes any party substituted for an Underwriter under this Section 11. Nothing herein will relieve a defaulting Underwriter from liability for its default.

SECTION 12. EFFECTIVE DATE. This Agreement shall become effective immediately as to Sections 6, 8, 10, 13 and 14 and, as to all other provisions, (i) if at the time of execution of this Agreement the Registration Statement has not become effective, at 2 P.M., California time, on the first full business day following the effectiveness of the Registration Statement, or (ii) if at the time of execution of this Agreement the Registration Statement has been declared effective, at 2 P.M., California time, on the first full business day following the date of execution of this Agreement; but this Agreement shall nevertheless become effective at such earlier time after the Registration Statement becomes effective as the Representatives may determine on and by notice to the Company or by release of any of the Common Shares for sale to the public. For purposes of this Section 12, the Common Shares shall be deemed to have been so released upon the release for publication of any newspaper advertisement relating to the Common Shares or upon the release by the Representatives of telegrams (i) advising Underwriters that the Common Shares are released for public offering or (ii) offering the Common Shares for sale to securities dealers, whichever may occur first.

SECTION 13. TERMINATION. Without limiting the right to terminate this Agreement pursuant to any other provision hereof:

- (a) This Agreement may be terminated by the Company by notice to the Representatives or by the Representatives by notice to the Company at any time prior to the time this Agreement shall become effective as to all its provisions, and any such termination shall be without liability on the part of the Company to any Underwriter (except for the expenses to be paid or reimbursed by the Company pursuant to Sections 6 and 8 and except to the extent provided in Section 10) or of any Underwriter to the Company (except to the extent provided in Section 10).
- (b) This Agreement may also be terminated by the Representatives prior to the First Closing Date by notice to the Company (i) if additional material governmental restrictions, not in force and effect on the date hereof, shall have been imposed upon trading in securities generally or minimum or maximum prices shall have been generally established on the New York Stock Exchange or the American Stock Exchange or in the over-the-counter market by the NASD, or trading in securities generally shall have been suspended on either such Exchange or in the over-the-counter market by the NASD, or a general banking moratorium shall have been established by federal, New York, Massachusetts or California authorities, (ii) if an outbreak of major hostilities or other national or international calamity or any substantial change in political, financial or economic conditions shall have occurred or shall have accelerated or escalated to such an extent, as, in the judgment of the Representatives, to affect adversely the marketability of the Common Shares, (iii) if any adverse event shall have occurred or shall exist which makes untrue or incorrect in any material respect any statement or information contained in the Registration Statement or Prospectus or which is not reflected in the Registration Statement or Prospectus but should be reflected therein in order to make the statements or information contained therein not misleading in any material respect, or (iv) if there shall be any action, suit or proceeding pending or threatened, or there shall have been any development or prospective development involving particularly the business or properties or securities of the Company or any of its subsidiaries or the transactions contemplated by this Agreement, which, in the reasonable judgment of the Representatives, may materially and adversely affect the Company's business or earnings and makes it impracticable or inadvisable to offer or sell the Common Shares. Any termination pursuant to this Section 13(b) shall be without liability on the part of any Underwriter to the Company or on the part of the Company to any Underwriter, except for expenses to be paid or reimbursed by the Company pursuant to Sections 6 and 8 and except to the extent provided in Section 10.
- (c) This Agreement shall also terminate at 5 P.M., California time, on the tenth full business day after the Registration Statement shall have become effective if the initial public offering price of the Common Shares shall not then as yet have been determined as provided in Section 4. Any termination pursuant to this Section 13(c) shall be without liability on the part of any Underwriter to the Company or on the part of the Company to any Underwriter, except for expenses to be paid or reimbursed by the Company pursuant to Sections 6 and 8 and except to the extent provided in Section 10.
- SECTION 14. REPRESENTATIONS AND INDEMNITIES TO SURVIVE DELIVERY. The respective indemnities, agreements, representations, warranties and other statements of the Company, of its officers and of the several Underwriters set forth in or made pursuant to this Agreement will remain in full force and effect, regardless of any investigation made by or on behalf of any Underwriter or the Company or any of its or their partners, officers or directors or any controlling person, as the case may be, and will survive delivery of and payment for the Common Shares sold hereunder and any termination of this Agreement.
- SECTION 15. NOTICES. All communications hereunder shall be in writing and, if sent to the Representatives shall be mailed, delivered or telegraphed and confirmed to the Representatives in care of Montgomery Securities at 600 Montgomery Street, San Francisco, California 94111, Attention: Jack

G. Levin, with a copy to Foley, Hoag & Eliot, One Post Office Square, Boston, Massachusetts 02109, Attention: Adam Sonnenschein, and if sent to the Company shall be mailed, delivered or telegraphed and confirmed to the Company at 20 Sylvan Road, Woburn, Massachusetts, Attention: Chief Financial Officer, with a copy to Brown, Rudnick, Freed & Gesmer, One Financial Center, Boston, Massachusetts 02111, Attention: Steven R. London. The Company or the Representatives may change the address for receipt of communications hereunder by giving notice to the others.

SECTION 16. SUCCESSORS. This Agreement will inure to the benefit of and be binding upon the parties hereto, including any substitute Underwriters pursuant to Section 11, and to the benefit of the officers and directors and controlling persons referred to in Section 10, and in each case their respective successors, personal representatives and assigns, and no other person will have any right or obligation hereunder. No such assignment shall relieve any party of its obligations hereunder. The term "successors" shall not include any purchaser of the Common Shares as such from any of the Underwriters merely by reason of such purchase.

SECTION 17. REPRESENTATION OF UNDERWRITERS. You will act as the Representatives for the several Underwriters in connection with all dealings hereunder, and any action under or in respect of this Agreement taken by the Representatives jointly or by Montgomery Securities, on behalf of the Representatives, will be binding upon all the Underwriters.

SECTION 18. PARTIAL UNENFORCEABILITY. The invalidity or unenforceability of any section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other section, paragraph or provision hereof. If any section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

SECTION 19. APPLICABLE LAW. This Agreement shall be governed by and construed in accordance with the internal laws (and not the laws pertaining to conflicts of laws) of the State of California.

SECTION 20. GENERAL. This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. This Agreement may be executed in counterparts, each of which shall be an original and both of which shall constitute one and the same document. In this Agreement, the singular and the plural include one another. The section headings in this Agreement are for the convenience of the parties only and will not affect the construction or interpretation of this Agreement. Unless otherwise provided, references to "Sections" shall be to sections of this Agreement. The words "herein" and "hereof" and other words of similar import refer to this Agreement as a whole and not to any particular part of this Agreement. The word "including" as used herein shall not be construed so as to exclude any other thing not referred to or described. This Agreement may be amended or modified, and the observance of any term of this Agreement may be waived, only by a writing signed by the Company and the Representatives.

* *

If the foregoing is in accordance with your understanding of our agreement, kindly sign and return to us the enclosed copies hereof, whereupon it will become a binding agreement between the Company and the several Underwriters, including the Representatives, all in accordance with its terms.

Very truly yours,

Alpha Industries, Inc.

	By:						
	,	President	and	Chief	Executive	Officer	
Inderwriting	Agreement	is hereby	/				

The foregoing Underwriting Agreement is hereby confirmed and accepted in San Francisco, California, as of the date first above written.

Montgomery Securities Oppenheimer & Co., Inc. Adams, Harkness & Hill, Inc. As Representatives of the several Underwriters named in Schedule A hereto

By: Montgomery Securities

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SCHEDULE A

Name of Underwriter	Number of Firm Common Shares to be Purchased
Montgomery Securities Oppenheimer & Co., Inc	
TOTAL	2,000,000

Schedule B

PRICE DETERMINATION AGREEMENT

Underwriting Agreement dated Inc. and the several Underwriters	delivered pursuant to Section 4 of the, 1995 between Alpha Industries, named in Schedule A thereto. Capitalized n shall have the respective meanings ascribed to ent.
the initial public offering price that the underwriting discount sh	derwriters hereby confirm their agreement that e of the Common Shares shall be \$ per share, hall be \$ per share, and that the purchase Underwriters for the Common Shares to be be \$ per share.
	executed in counterparts, each of which shall be all constitute one and the same document.
	Alpha Industries, Inc.
	By: Title:
	Montgomery Securities Oppenheimer & Co., Inc. Adams, Harkness & Hill, Inc. As Representatives of the several Underwriters
	By: Montgomery Securities

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Ву:____

RESTATED CERTIFICATE OF INCORPORATION

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ALPHA INDUSTRIES, INC.

It is hereby certified that:

- 1. The present name of the Corporation (hereinafter called the "corporation") is Alpha Industries, Inc. The name under which the corporation was originally incorporated is Alpha Microwave, Inc. and the date of filing the original certificate of incorporation of the corporation with the Secretary of State of Delaware is September 10, 1962.
- 2. The provisions of the Certificate of Incorporation, as amended, of the corporation are hereby restated and integrated into the single instrument which is hereinafter set forth, and which is entitled Restated Certificate of Incorporation of Alpha Industries, Inc. without any further amendments and without any discrepancy between the provisions of the Certificate of Incorporation as amended and the provisions of the said single instrument hereinafter set forth.
- 3. The restatement of the Certificate of Incorporation herein certified has been duly adopted by the directors in accordance with the provisions of Sections 141 and 245 of the General Corporation Law of the State of Delaware.
- 4. The effective date of the Restated Certificate of Incorporation shall be its filing date.
- 5. The Certificate of Incorporation of the corporation, as restated herein, shall upon the effective date of this Restated Certificate of Incorporation, read as follows:

RESTATED CERTIFICATE OF INCORPORATION

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ALPHA INDUSTRIES, INC.

FIRST: The name of the corporation is ALPHA INDUSTRIES, INC.

SECOND: Its principal office in the State of Delaware is located at 32

Loockerman Square, Suite L-100, in the City of Dover, County of Kent. The name and address of its registered agent is The Prentice-Hall Corporation System, Inc., 32 Loockerman Square, Suite L-100, Dover, Delaware.

THIRD: The nature of the business, or objects or purposes to be

transacted, promoted or carried on are:

To manufacture, produce, assemble, fabricate, import, lease, purchase or otherwise acquire; to invest in, own, hold, use, license the use of, install, handle, maintain, service or repair; to sell, pledge, mortgage, exchange, export, distribute, lease, assign and otherwise dispose of, and generally to trade and deal in and with, as principal or agent, at wholesale, retail, on commission or otherwise, electronic systems, equipment and components, and electrical and electro-mechanical apparatus and equipment of all kinds and descriptions, electronics, telecommunications, communications and similar equipment of all descriptions, microwave telephone devices and equipment, radio, sonar, radar, television and related and similar devices and equipment, cables, motors, dynamos, generating plants, meters, supplies, parts, equipment, apparatus, machinery improvements, appliances, tools, and goods, wares, merchandise, commodities, articles of commerce and property of every kind and description, and any and all products, machinery, equipment and supplies used or useful in connection therewith.

To work and operate as technicians, repairmen, welders, toolmakers, die casters, moulders, founders, metal workers, machinists, smiths, modelmakers and metallurgists; to design, construct, repair, improve and manufacture all kinds of tools, machines, parts of machines, devices, mechanisms and inventions of all kinds; to carry on the business of manufacturing, buying, selling and generally dealing in and with machineshop, foundry and factory supplies, tools, apparatus, equipment, and machinery of all kinds.

To carry on the business of research, experimentation, invention, discovery, design, testing, development, and utilization or processes and methods, or improvements thereto, in all the arts and sciences, and trades, and in the engineering fields; including the conception, development, execution and completion of special scientific and engineering projects, on its own behalf and on behalf of any other person, firm, association, corporation, public or private, or the government of the United States of America, or any foreign government, or any political subdivision thereof, or any governmental agency, and in this connection to operate testing stations as may be necessary or advisable.

To carry on and make tests, experiments, analyses and to do research work and to perform analytical, experimental and research services of all kinds whether of a scientific nature or otherwise, and to do any and all acts and transact any and all business which shall or may be or become incidental to or arise out of or be connected with such business, or any part thereof.

To acquire by purchase, assignment, grant, license or otherwise, to apply for, secure, lease or in any manner obtain, to develop, hold, use, own, exploit, operate, enjoy and introduce, to sell, assign, lease, mortgage, pledge, grant licenses and rights of all kinds in respect of, or otherwise dispose of, and generally to deal in and with and turn to account for any or all purposes, either for itself or as nominee or agent for others:

- (1) Any and all inventions, devices, processes and discoveries, and improvements and modifications thereof and rights and interests therein;
- (2) Any and all letters patent or applications for letters patent of the United States of America or of any other country, state, locality or authority, and any and all rights, interests and privileges connected therewith or incidental or appertaining thereto;
- (3) Any and all copyrights granted by the United States of America or any other country, state, locality or authority, and any and all rights, interests and privileges connected therewith or incidental or appertaining thereto; and
- (4) Any and all trade-marks, trade names, trade symbols, labels, designs and other indications of origin and ownership granted by or recognized under the laws of the United States of America or any other country, state, locality or authority, and any and all rights, interests and privileges connected therewith or incidental or appertaining thereto.

To engage in engineering work of all kinds, including but not limited to consulting engineering; to design, lay out, construct, supervise the construction of, install, maintain, own, operate, lease, repair, service, and generally deal in and deal with electronic, electrical and mechanical apparatus, devices, systems, processes, machinery, supplies and any other articles or materials used or capable of being used in connection with any of the foregoing and in furtherance of any of the foregoing objects or purposes, to employ the services of consulting, civil, chemical, mechanical, electronic, electrical and industrial engineers in all or any of their respective branches.

To act as agent, manufacturer's agent, distributor, representative, dealer, broker, wholesaler, retailer, or in any other capacity as principal or agent, and with any and all persons, firms, partnerships, corporations, and others, and to purchase, sell, distribute, export, import, pledge, make advances upon, or otherwise deal in and deal with goods, wares and merchandise of every class and description; to act as dealers, distributors, selling agents or representatives, sectionally or nationally, of manufacturers, producers, distributors, dealers and others; to establish and maintain dealerships and agencies of all kinds; to represent in any capacity, manufacturers, wholesalers, jobbers and dealers in the sale and distribution of their products.

To acquire by purchase, exchange, contract, lease, options for lease, assignment of lease or otherwise, and to own, equip, erect, build, construct, finance, maintain, operate and improve, and to sell, lease, mortgage, pledge, transfer or otherwise dispose of, properties of all kinds, factories, warehouses, stores, buildings, structures, offices, houses, works, plants, depots, and other buildings and structures and all other property and things of whatsoever kind and nature, real, personal or mixed, tangible or intangible, including good will, in any part of the world, and to establish, acquire, operate, conduct and carry on any business or businesses suitable, necessary, useful or convenient in connection therewith.

To manufacture, purchase or otherwise acquire, invest in, own, mortgage, pledge, sell, assign and transfer or otherwise dispose of, trade, deal in and deal with goods, wares and merchandise and personal property of every class and description.

To acquire, and pay for in cash, stock or bonds of this corporation or otherwise, the good will, rights, assets and property, and to undertake or assume the whole or any part of the obligations or liabilities of any person, firm, association or corporation.

To acquire by purchase, subscription or otherwise, and to receive, hold, own, guarantee, sell, assign, exchange, transfer, mortgage, pledge or otherwise dispose of or deal in and with any of the shares of the capital stock, or any voting trust certificates in respect of the shares of capital stock, scrip, warrants, rights, bonds, debentures, notes, trust receipts, and other securities, obligations, choses in action and evidences of indebtedness or interest issued or created by any corporations, joint stock companies, syndicates, associations, firms, trusts or persons, public or private, or by the government of the United States of America, or by any foreign government, or by any state, territory, province, municipality or other political subdivision or by any governmental agency, and as owner thereof to possess and exercise all the rights, powers and privileges of ownership, including the right to execute consents and vote thereon, and to do any and all acts and things necessary or advisable for the preservation, protection, improvement and enhancement in value thereof.

To enter into, make and perform contracts of every kind and description with any person, firm, association, corporation, municipality, county, state, body politic or government or colony or dependency thereof.

To borrow or raise moneys for any of the purposes of the corporation and, from time to time without limit as to amount, to draw, make, accept, endorse, execute and issue promissory notes, drafts, bills of exchange, warrants, bonds, debentures and other negotiable or non-negotiable instruments and evidences of indebtedness, and to secure the payment of any thereof and of the interest thereon by mortgage upon or pledge, conveyance or assignment in trust of the whole or any part of the property of the corporation, whether at the time owned or thereafter acquired, and to sell, pledge or otherwise dispose of such bonds or other obligations of the corporation for its corporate purposes.

To loan to any person, firm or corporation any of its surplus funds, either with or without security.

To purchase, hold, sell and transfer the shares of its own capital stock; provided it shall not use its funds or property for the purchase of its own shares of capital stock when such use would cause any impairment of its capital except as otherwise permitted by law, and provided further that shares of its own capital stock belonging to it shall not be voted upon directly or indirectly.

To have one or more offices, to carry on all or any of its operations and business and without restriction or limit as to amount to purchase or otherwise acquire, hold, own, mortgage, sell, convey or otherwise dispose of, real and personal property of every class and description in any of the states, districts, territories or colonies of the United States and in any and all foreign countries, subject to the laws of such state, district, territory, colony or country.

In general, to carry on any other business in connection with the foregoing, and to have and exercise all the powers conferred by the laws of Delaware upon corporations formed under the General Corporation Law of the State of Delaware, and to do any or all of the things hereinbefore set forth to the same extent as natural persons might or could do.

The objects and purposes specified in the foregoing clauses shall, except where otherwise expressed, be in nowise limited or restricted by reference to, or inference from, the terms of any other clause in this certificate of incorporation, but the objects and purposes specified in each of the foregoing clauses of this article shall be regarded as independent objects and purposes.

FOURTH: The total number of shares of stock which the Corporation shall

have the authority to issue is thirty million (30,000,000) and the par value of each such share is twenty-five cents (\$.25) amounting in the aggregate to Seven Million Five Hundred Thousand Dollars (\$7,500,000.00).

The designations and the powers, preferences and rights, and the qualifications, limitations or restrictions thereof are as follows:

No stockholder of this corporation shall by reason of his holding shares of any class have any preemptive or preferential right to purchase or subscribe to any shares of any class of this corporation, now or hereafter to be authorized, or any notes, debentures, bonds, or other securities convertible into or carrying options or warrants to purchase shares of any class, now or hereafter to be authorized, whether or not the issuance of any such shares, or such notes, debentures, bonds or other securities, would adversely affect the dividend or voting rights of such stockholder, other than such rights, if any, as the board of directors, in its discretion from time to time may grant, and at such price as the board of directors in its discretion may fix; and the board of directors may issue shares of any class of this corporation, or any notes, debentures, bonds, or other securities convertible into or carrying options or warrants to purchase shares of any class, without offering any such shares of any class, either in whole or in part, to the existing stockholders of any class.

FIFTH: The minimum amount of capital with which the corporation will ----commence business is One Thousand Dollars (\$1,000).

SIXTH: The names and places of residence of the incorporators are as $\overline{}$ follows:

NAMES RESIDENCES

S. H. Livesay Wilmington, Delaware

J. F. Cook Wilmington, Delaware

F. J. Obara, Jr. Wilmington, Delaware

 ${\small \textbf{SEVENTH:}} \ \ \textbf{The corporation is to have perpetual existence.}$

EIGHTH: The private property of the stockholders shall not be subject to ----the payment of corporate debts to any extent whatever.

NINTH: In furtherance and not in limitation of the powers conferred by ----- statute, the board of directors is expressly authorized:

To make, alter or repeal the by-laws of the corporation.

To authorize and cause to be executed mortgages and liens upon the real and personal property of the corporation.

To set apart out of any of the funds of the corporation available for dividends a reserve or reserves for any proper purpose and to abolish any such reserve in the manner in which it was created.

By resolution passed by a majority of the whole board, to designate one or more committees, each committee to consist of two or more of the directors of the corporation, which, to the extent provided in the resolution or in the bylaws of the corporation, shall have and may exercise the powers of the board of directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it. Such committee or committees shall have such name or names as may be stated in the by-laws of the corporation or as may be determined from time to time by resolution adopted by the board of directors.

TENTH: a) The By-laws of the corporation may provide for

indemnification of directors, officers, employees and agents, by whomever elected or appointed, to the full extent permitted by law.

b) A director shall be liable to the extent provided by applicable law (i) for breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) pursuant to Section 174 of the Delaware General Corporation Law, or (iv) for any transaction from which the director derived an improper personal benefit. Except as set forth in the foregoing sentence, no director shall be personally liable to the corporation or its stockholders for monetary damages for any breach of fiduciary duty by such director as a director. No amendment to or repeal of this Paragraph (b) of Article Tenth shall apply to or have any effect on the liability or alleged liability of any director of the corporation for or with respect to any acts or omissions of such director occurring prior to such amendment.

ELEVENTH: No contract or other transaction between this corporation and

any person, firm, association or corporation and no act of this corporation shall, in the absence of fraud, be invalidated or in any way affected by the fact that any of the directors of this corporation are pecuniarily or otherwise interested, directly or indirectly, in such contract, transaction or act, or are related to or interested in, as a director, stockholder, officer, employee, member or otherwise, such person, firm, association or corporation. Any director so interested or related who is present at any meeting of the board of directors or committee or directors at which action on any such contract, transaction or act is taken may be counted in determining the presence of a quorum at such meeting and may vote thereat with respect to such contract, transaction or act with like force and effect as if he was not so interested or related. No director so interested or related shall, because of such interest or relationship, be disqualified from holding his office or be liable to the corporation or any stockholder or creditor thereof for any loss incurred by this corporation under or by reason of such contract, transaction or act, or be accountable for any gains or profits he may have realized therein.

TWELFTH: Whenever a compromise or arrangement is proposed between this

corporation and its creditors or any class of them and/or between this corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this corporation or of any creditor or stockholder thereof, or on the application of any receiver or receivers appointed for this corporation under the provisions of section 291 of Title 8 of the Delaware Code or on the application of trustees in dissolution or of any receiver or receivers appointed for this corporation under the provisions of section 279 of Title 8 of the Delaware Code order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this corporation as consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this corporation, as the case may be, and also on this corporation.

THIRTEENTH: Meetings of stockholders may be held outside the State of

Delaware, if the by-laws so provide. The books of the corporation may be kept (subject to any provisions contained in the statutes) outside the State of Delaware at such place or places as may be

designated from time to time by the board of directors or in the by-laws of the corporation. Elections of directors need not be by ballot unless the by-laws of the corporation shall so provide.

FOURTEENTH: Any action required or permitted to be taken by the

stockholders of the corporation must be effected at an annual or special meeting of stockholders of the corporation and may not be effected by any consent in writing by such stockholders.

FIFTEENTH:

- I. (i) Except as set forth in part (ii) of this Article Fifteenth, the affirmative vote or consent of the holders of 80% of the shares of all classes of stock of the corporation entitled to vote for the election of directors, considered for the purposes of this $\operatorname{ARTICLE}$ as one class, shall be required (a) for the adoption of any agreement for the merger or consolidation of the corporation with or into any Other Corporation (as hereinafter defined), or (b) to authorize any sale, lease, exchange, mortgage, pledge or other disposition of all, or substantially all of the assets of the corporation or any Subsidiary (as hereinafter defined) to any Other Corporation, or (c) to authorize the issuance or transfer by the corporation of any Substantial Amount (as hereinafter defined) of securities of the corporation in exchange for the securities or assets of any Other Corporation. Such affirmative vote or consent shall be in addition to the vote or consent of the holders of the stock of the corporation otherwise required by law, the Certificate of Incorporation of the corporation or any agreement or contract to which the corporation is a party.
 - (ii) The provisions of part (i) of this Article Fifteenth, shall not be applicable to any transaction described therein if such transaction is approved by resolution of the Board of Directors of the corporation provided that a majority of the members of the Board of Directors voting for the approval of such transaction were duly elected and acting members of the Board of Directors prior to the time any such Other Corporation may have become a Beneficial Owner (as hereinafter defined) of 5% or more of the shares of stock of the corporation entitled to vote for the election of directors.
 - (iii) For the purposes of part (ii) of this Article, the Board of Directors shall have the power and duty to determine for the purposes of this Article Fifteenth, on the basis of information known to such Board, if and when any Other Corporation is the Beneficial Owner of 5% or more of the outstanding shares of stock of the corporation entitled to vote for the election of directors. Any such determination shall be conclusive and binding for all purposes of this Article Fifteenth.
 - (iv) As used in Article Fifteenth, the following terms shall have the meanings indicated:

"Other Corporation" means any person, firm, corporation or other entity, other than a subsidiary of the corporation.

"Subsidiary" means any corporation in which the corporation owns, directly or indirectly, more than 50% of the voting securities.

"Substantial Amount" means any securities of the corporation having a then fair market value of more than \$500,000.

An Other Corporation (as defined above) shall be deemed to be the "Beneficial Owner" of stock if such Other Corporation or any "affiliate" or "associate" of such Other Corporation (as those terms are defined in Rule 12b-2 promulgated under the Securities Exchange Act of 1934 (15 U.S.C. 78 aaa et seq.), as amended from time to time), directly or indirectly, controls the voting of such stock or has any options, warrants, conversion or other rights to acquire such stock.

(v) This Article Fifteenth may not be amended, revised or revoked, in whole or in part, except by the affirmative vote or consent of the holders of 80% of the shares of all classes of stock of the corporation entitled to vote for the election of directors, considered for the purposes of this Article Fifteenth as one class of stock.

SIXTEENTH: The number of directors shall be fixed from time to time

exclusively by the board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exist any vacancies in previously authorized directorships at the time any such resolution is presented to the board of directors for adoption). At the 1983 annual meeting of stockholders, the directors shall be divided into three classes, as nearly equal in number as possible, with the term of office of the first class to expire at the 1984 annual meeting of stockholders, the term of office of the second class to expire at the 1985 annual meeting of stockholders and the term of office of the third class to expire at the 1986 annual meeting of stockholders. At each annual meeting of stockholders following such initial classification and election, directors elected to succeed those directors whose terms expire shall be elected for a term of office to expire at the third succeeding annual meeting of stockholders after their election, unless, by reason of any intervening changes in the authorized number of directors, the board shall designate one or more of the then expiring directorships as directorships of another class in order more nearly to achieve equality of number of directors among the classes.

Notwithstanding the rule that the three classes shall be as nearly equal in number of directors as possible, in the event of any change in the authorized number of directors, each director then continuing to serve as such shall nevertheless continue as a director of the class of which he is a member until the expiration of his current term, or his prior death, resignation or removal. If any newly created directorship may, consistently with the rule that the three classes shall be as nearly equal in number of directors as possible, be allocated to one of two or more

classes, the board of directors shall allocate it to that of the available classes whose term of office is due to expire at the earliest date following such allocation.

Vacancies resulting from any increase in the authorized number of directors or any vacancies in the board of directors resulting from death, resignation, retirement, disqualification, removal from office or other cause may be filled only by a majority vote of the directors then in office, though less than a quorum, and directors so chosen shall hold office for a term expiring at the annual meeting of stockholders at which the term of office of the class to which they have been elected expires. No decrease in the number of authorized directors shall shorten the term of any incumbent director.

${\tt SEVENTEENTH:}$

- A. The following definitions shall apply for the purpose of this ${\sf Article}$ Seventeenth only:
 - (1) "Announcement Date" shall mean the date of first public announcement of the proposal of a Business Combination.
 - (2) "Business Combination" shall mean:
 - (i) any merger or consolidation of the corporation or any Subsidiary with (a) any Related Person, or (b) any other corporation (whether or not itself a Related Person) which is, or after such merger or consolidation would be, an Affiliate of a Related Person; or
 - (ii) any sale, lease, exchange, mortgage, pledge, transfer or other disposition (in one transaction or a series of transactions) to or with any Related Person or any Affiliate of any Related Person of any assets of the corporation or any Subsidiary having an aggregate Fair Market Value of \$500,000 or more; or
 - (iii) the issuance or transfer by the corporation or any Subsidiary (in one transaction or a series of transactions) of any securities of the corporation or any Subsidiary to any Related Person or any Affiliate of any Related Person in exchange for cash, securities or other property (or a combination thereof) having an aggregate Fair Market Value of \$500,000 or more; or
 - (iv) the adoption of any plan or proposal for the liquidation or dissolution of the corporation proposed by or on behalf of any Related Person or any Affiliate of any Related Person; or
 - (v) any reclassification of securities (including any reverse stock split), or recapitalization of the corporation, or any merger or consolidation of the corporation with any of its Subsidiaries or any other transaction (whether

or not with or into or otherwise involving the Related Person) which has the effect, directly or indirectly, of increasing the proportionate share of the outstanding shares of any class of equity or convertible securities of the corporation or any Subsidiary which is directly or indirectly owned by any Related Person or any Affiliate of any Related Person.

- "Consideration Received" shall mean the amount of cash and the Fair Market Value, as of the Consummation Date, of consideration other than cash received by the stockholder. In the event of any Business Combination in which the corporation survives, the consideration other than cash shall include shares of any class of outstanding Voting Stock retained by the holders of such shares.
- "Consummation Date" shall mean the date upon which the Business Combination is consummated.
- "Continuing Director" shall mean any member of the board of directors of the corporation who is unaffiliated with the Related Person and who was a member of the board of directors prior to the time that the Related Person became a Related Person, and any successor of a Continuing Director who is unaffiliated with the Related Person and is recommended to succeed a Continuing Director by a majority of the Continuing Directors then on the board of directors.
- (6) "Determination Date" shall mean the date upon which a Related Person became a Related Person.
- (7) "Exchange Act" shall mean the Securities Exchange Act of 1934 as in effect on May 1, 1983.
- "Fair Market Value" shall mean: (i) in the case of stock, the (8) highest closing sale price during the 30-day period immediately preceding the date in question of a share of such stock on the principal United States securities exchange registered under the Exchange Act on which such stock is listed, or, if such stock is not listed on any such exchange, the highest closing bid quotation with respect to a share of such stock during the 30-day period preceding the date in question on the National Association of Securities Dealers, Inc. Automated Quotations System or any system then in use or, if no such quotations are available, the fair market value on the date in question of a share of such stock as determined by the board of directors in good faith; and (ii) in the case of property other than cash or stock, the fair market value of such property on the date in question as determined by the board of directors in good faith.
- (9) "Related Person" shall mean any individual, firm, corporation or other entity (other than the corporation or any Subsidiary) which, together with its Affiliates and Associates (as such terms are defined in Rule 12b-2 under the Exchange Act) and with any other individual, firm, corporation or other entity (other than the

corporation or any Subsidiary) with which it or they have any agreement, arrangement or understanding with respect to acquiring, holding or disposing of Voting Stock, beneficially owns (as defined in Rule 13d-3 of the Exchange Act, except that such term shall include any Voting Stock which such person has the right to acquire, whether or not such right may be exercised within 60 days), directly or indirectly, more than twenty percent of the voting power of the outstanding Voting Stock.

- (10) "Subsidiary" shall mean any corporation in which a majority of the capital stock entitled to vote generally in the election of directors is owned, directly or indirectly, by the corporation.
- (11) "Voting Stock" shall mean all of the then outstanding shares of the capital stock of the corporation entitled to vote generally in the election of directors.
- B. In addition to the affirmative vote otherwise required by law or any provision of this Certificate of Incorporation (including without limitation Article Fifteenth), except as otherwise provided in Section C, any Business Combination shall require the affirmative vote of the holders of 90% of all Voting Stock, voting together as a single class.

Such affirmative vote shall be required notwithstanding any other provision of this Certificate of Incorporation or any provision of law or of any agreement with any national securities exchange which might otherwise permit a lesser vote or no vote, and such affirmative vote shall be required in addition to any affirmative vote of the holders of any particular class or series of the Voting Stock required by law or by this Certificate of Incorporation.

- C. The provisions of Section B of this Article Seventeenth shall not be applicable to any particular Business Combination, and such Business Combination shall require only such affirmative vote as is required by law, any other provision of this Certificate of Incorporation (including Article Fifteenth), or any agreement with any national securities exchange, if, in the case of a Business Combination that does not involve any Consideration Received by the stockholders of the corporation, solely in their respective capacities as stockholders of the corporation, the condition specified in the following paragraph (1) is met, or, in the case of any other Business Combination, the conditions specified in either of the following paragraphs (1) and (2) are met:
 - (1) The Business Combination shall have been approved by a majority of the Continuing Directors, it being understood that this condition shall not be capable of satisfaction unless there is at least one Continuing Director.
 - (2) All of the following conditions shall have been met:
 - (i) The form of the Consideration Received by holders of shares of a particular class of outstanding Voting Stock shall be in cash or in the same form as the Related Person has paid for shares of such class of Voting

Stock within the two-year period ending on and including the Determination Date. If, within such two-year period, the Related Person has paid for shares of any class of Voting Stock with varying forms of consideration, the form of Consideration Received per share by holders of shares of such class of Voting Stock shall be either cash or the form used to acquire the largest number of shares of such class of Voting Stock acquired by the Related Person within such two-year period.

- (ii) The aggregate amount of Consideration Received per share by holders of each class of Voting Stock in such Business Combination shall be at least equal to the higher of the following (it being intended that the requirements of this paragraph 2(ii) shall be required to be met with respect to every such class of Voting Stock outstanding, whether or not the Related Person has previously acquired any shares of that particular class of Voting Stock):
 - (a) (if applicable) the highest per share price (including any brokerage commissions, transfer taxes and soliciting dealers' fees) paid by the Related Person for any shares of that class of Voting Stock acquired by it within the two-year period immediately prior to the Announcement Date or in the transaction in which it became a Related Person, whichever is higher; or
 - (b) the Fair Market Value per share of such class of Voting Stock on the Announcement Date; or
 - (c) in the case of any class of preferred stock, the highest preferential amount per share to which the holders of shares of such class of Voting Stock are entitled in the event of any voluntary or involuntary liquidation, dissolution or winding up of the corporation.
- (iii) After such Related Person has become a Related Person and prior to the consummation of such Business Combination: (a) except as approved by a majority of the Continuing Directors, there shall have been no failure to declare and pay at the regular date therefor any full quarterly dividends (whether or not cumulative) on any outstanding preferred stock; (b) there shall have been (I) no reduction in the annual rate of dividends paid on the Common Stock (except as necessary to reflect any subdivision of the Common Stock), except as approved by a majority of the Continuing Directors, and (II) an increase in such annual rate of dividends as necessary to reflect any reclassification (including any reverse stock split), recapitalization, reorganization or any similar transaction which has the effect of reducing the number of outstanding shares of the Common Stock, unless the failure so to increase such annual rate is approved by a majority

of the Continuing Directors; and (c) such Related Person shall have not become the beneficial owner of any newly issued share of Voting Stock directly or indirectly from the corporation except as part of the transaction which results in such Related Person becoming a Related Person.

- (iv) After such Related Person has become a Related Person, such Related Person shall not have received the benefit, directly or indirectly (except proportionately, solely in such Related Person's capacity as a stockholder of the corporation), of any loans, advances, guarantees, pledges or other financial assistance or any tax credits or other tax advantages provided by the corporation, whether in anticipation of or in connection with such Business Combination or otherwise.
- (v) A proxy or information statement describing the proposed Business Combination and complying with the requirements of the Exchange Act and the rules and regulations thereunder (or any subsequent provisions replacing such act, rules or regulations) shall be mailed to all stockholders of the corporation at least 30 days prior to the consummation of such Business Combination (whether or not such proxy or information statement is required to be mailed pursuant to the Exchange Act or subsequent provisions). Such proxy or information statement shall contain on the front thereof, prominently displayed, any recommendation as to the advisability or inadvisability of the Business Combination which the Continuing Directors, or any of them, may have furnished in writing to the board of directors.
- D. A majority of the total number of authorized directors (whether or not there exist any vacancies in previously authorized directorships at the time any determination is to be made by the board of directors) shall have the power and duty to determine, on the basis of information known to them after reasonable inquiry, all facts necessary to determine compliance with this Article Seventeenth including, without limitation, (1) whether a person is a Related Person, (2) the number of shares of Voting Stock beneficially owned by any person, (3) whether the applicable conditions set forth in paragraph (2) of Section C have been met with respect to any Business Combination, and (4) whether the assets which are the subject of any Business Combination or the Consideration Received for the issuance or transfer of securities by the corporation or any Subsidiary in any Business Combination have an aggregate Fair Market Value of \$500,000 or more.
- E. Nothing contained in this Article Seventeenth shall be construed to relieve any Related Person from any fiduciary obligation imposed by law.

EIGHTEENTH: The corporation reserves the right to amend, alter, change or ------repeal any provision contained in this Certificate of Incorporation, in the

manner hereafter set forth, and all rights conferred upon stockholders herein are granted subject to this reservation.

- A. Except as provided in Sections B and C, any provision of this Certificate of Incorporation may be amended, altered, changed or repealed in the manner now or hereafter prescribed by statute.
- B. Article Fifteenth may be amended only in accordance with the terms thereof. $\ensuremath{\mathsf{E}}$
- C. Notwithstanding any of the provisions of this Certificate of Incorporation or any provision of law which might otherwise permit a lesser vote or no vote, but in addition to any affirmative vote of holders of any particular class or series of capital stock of the corporation required by law or this Certificate of Incorporation, the affirmative vote of the holders of at least the following percentages of all then outstanding shares of capital stock of the corporation entitled to vote for the election of directors, voting together as a single class, shall be required to amend, alter, change or repeal the indicated provisions of this Certificate of Incorporation:
 - (i) 80% in the case of any amendment, alteration, change or repeal of Articles Fourteenth and Sixteenth; and
 - (ii) 90% in the case of any amendment, alteration, change or repeal of Article Seventeenth.

Signed and attested to on October 20, 1995.

/s/ Martin J. Reid
-----Martin J. Reid, President

Attest:

/s/ Donald E. Paulson
----Donald E. Paulson, Secretary

[CERTIFICATE APPEARS HERE]

[LOGO OF ALPHA INDUSTRIES, INC. APPEARS HERE]

NUMBER SHARES

FBU 9589

ALPHA INDUSTRIES, INC.

CUSIP 020753 10 9

SEE REVERSE FOR CERTAIN DEFINITIONS

INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE
THIS CERTIFICATE IS TRANSFERABLE IN BOSTON, MASSACHUSETTS OR NEW YORK, NEW YORK

THIS IS TO CERTIFY THAT

SPECIMEN

is the owner of

FULLY PAID AND NON-ASSESSABLE SHARES OF COMMON STOCK OF THE PAR VALUE OF \$.25 PER SHARE

of ALPHA INDUSTRIES, INC. (herein called the "Corporation") transferable on the books of the Corporation by the holder hereof in person or by duly authorized attorney upon surrender of this Certificate properly endorsed or assigned for transfer. This Certificate and the shares represented hereby are issued and shall be subject to the laws of the State of Delaware and to the provisions of the Certificate of Incorporation and the By-Laws of the Corporation, as amended from time to time. This Certificate is not valid until countersigned by the Transfer Agent and registered by the Registrar.

WITNESS the facsimile seal of the Corporation and the facsimile signatures of its duly authorized officers.

Dated

[SEAL APPEARS HERE]

[SIGNATURE APPEARS HERE]
TREASURER

[SIGNATURE APPEARS HERE]
CHAIRMAN

COUNTERSIGNED AND REGISTERED:

THE FIRST NATIONAL BANK OF BOSTON

BY

TRANSFER AGENT AND REGISTRAR

AUTHORIZED SIGNATURE

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

UNIF GIFT MIN ACT-....Custodian....

(Cust) (Minor)

TEN COM -as tenants in common

TEN ENT -as tenants by the entireties

JT TEN -as joint tenants with right of under Uniform Gifts to Minors survivorship and not as tenants Act..... in common (State) Additional abbreviations may also be used though not in the above list. FOR VALUE RECEIVED, ___ _____HEREBY SELL, ASSIGN AND TRANSFER UNTO PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE (PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE, OF ASSIGNEE) _Shares of the capital stock represented by the within Certificate, and do hereby irrevocably constitute and appoint to transfer the said stock on the books of the within named Corporation with full power of substitution in the premises. Dated___ THE SIGNATURE TO THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME AS WRITTEN UPON THE FACE OF THE CERTIFICATE NOTICE: IN EVERY PARTICULAR, WITHOUT ALTERATION OR ENLARGEMENT OR ANY CHANGE WHATEVER. Signature(s) Guaranteed: THE SIGNATURE(S) SHOULD BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (BANKS, STOCKBROKERS, SAVINGS AND LOAN ASSOCIATIONS AND CREDIT UNIONS WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM), PURSUANT TO S.E.C. RULE 17Ad-15.

This certificate also evidences and entitles the holder hereof to certain Rights as set forth in a Rights Agreement, dated as of November 24, 1986 (the "Rights Agreement"), between Alpha Industries, Inc. and The First National Bank of Boston, as Rights Agent, the terms of which are hereby incorporated herein by reference and a copy of which is on file at the principal executive offices of Alpha Industries, Inc. Under certain circumstances, as set forth in the Rights Agreement, such Rights may be redeemed, may expire, or may be evidenced by separate certificates and no longer be evidenced by this certificate. Alpha Industries, Inc. will mail or arrange for the mailing of a copy of the Rights

Agreement to the holder of this certificate without charge within five days after the receipt of a written request therefor.

October 26, 1995

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 2,300,000 shares (the "Shares") of the Company's Common Stock, \$.25 par value ("Common Stock"), and 2,300,000 Rights (as defined below).

Pursuant to the Registration Statement and an underwriting agreement by and between the Company, Montgomery Securities, Oppenheimer & Co., Inc. and Adams, Harkness & Hill, Inc. (the "Underwriters"), in substantially the form filed as Exhibit 1(a) to the Registration Statement (the "Underwriting Agreement"), the Company proposes to sell to the Underwriters up to 2,300,000 Shares of Common Stock. The Rights are issuable pursuant to that certain Amended and Restated Rights Agreement, dated as of November 24, 1986, as amended and restated July 3, 1990 and as amended through Amendment No. 2 dated September 24, 1990 (the "Rights Agreement"), providing in effect for the delivery of a right (a "Right"), along with each share of Common Stock issued by the Company pursuant to the Underwriting Agreement. 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, nor have we made any independent investigation as to the existence of actions, suits, investigations or proceedings, if any, pending or threatened against the Company.

Alpha Industries, Inc. October 26, 1995 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 paragraphs 1 and 2 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.
- 2. The Rights have been duly authorized, and when issued in accordance with the Rights Agreement, will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion as Exhibit 5(a) 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:							
	Steven	R.	London,	а	member	duly	authorized

SRL/DHM/JGN/mc

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:

- (i) 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 Rights Agreement;
 - (vi) the Registration Statement;
 - (vii) the Underwriting Agreement; and
- (viii) a letter dated October 17, 1995 from The First National Bank of Boston, the Company's registrar and transfer agent, as to the issued and outstanding shares of the Company.

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:

- 1. 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.
- 4. 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.

The Board of Directors Alpha Industries, Inc.:

We consent to the use of our report incorporated herein by reference and to the references to our firm under the headings "Selected Consolidated Financial Data" and "Experts" in the registration statement. Our report refers to the adoption of Financial Accounting Standard Board's Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes" in fiscal 1994.

Boston, Massachusetts October 26, 1995