

As filed with the Securities and Exchange Commission on November 19, 1997

Registration No. 333- _____

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-3
REGISTRATION STATEMENT
Under the
Securities Act of 1933

ODETICS, INC.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	95-2588496
(State or Other Jurisdiction of	(I.R.S. Employer
Incorporation or Organization)	Identification No.)

1515 South Manchester Avenue
Anaheim, California 92802
(714) 774-5000
(Address, Including Zip Code, and Telephone Number, Including
Area Code, of Registrant's Principal Executive Offices)

Joel Slutzky
Chairman and Chief Executive Officer
Odetics, Inc.
1515 South Manchester Avenue
Anaheim, California 92802
(714) 774-5000
(Name, Address, Including Zip Code, and Telephone Number
Including Area Code, of Agent for Service)

Copies to:
Pat Arrington, Esq.
Lee J. Leslie, Esq.
Brobeck, Phleger & Harrison LLP
4675 MacArthur Court, Suite 1000
Newport Beach, California 92660
(714) 752-7535

Approximate date of commencement of proposed sale to the public: From
time to time after the effective date of this Registration Statement.

If the only securities being registered on this form are being offered
pursuant to dividend or interest reinvestment plans, 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, other than securities offered only in connection with
dividend or interest reinvestment plans, check the following box. ☒

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

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

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

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	Amount of Registration Fee
Class A Common Stock, par value \$0.10 per share	173,859 shares	\$7.25	\$1,260,478	\$382

- (1) The price of \$7.25 per share, which was the average of the high and low prices of the Class A Common Stock on the Nasdaq National Market on November 10, 1997, is set solely for the purpose of calculating the registration fee pursuant to Rule 457(c) of the Securities Act of 1933, as amended.

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.

Information contained herein is subject to completion or amendment. A registration statement relating to these securities has been filed with the Securities and Exchange Commission. These securities may not be sold nor may offers to buy be accepted prior to the time the registration statement becomes effective. This prospectus shall not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of these securities in any State in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such State.

Subject to Completion
November 19, 1997

173,859 Shares

ODETICS, INC.

Class A Common Stock
(\$0.10 par value per share)

This prospectus (the "Prospectus") relates to the public offering, which is not being underwritten, of up to 173,859 shares (the "Shares") of Class A Common Stock, par value \$0.10 per share, of Odetics, Inc. ("Odetics," the "Company" or the "Registrant") by certain stockholders of the Company (the "Selling Stockholders"). The Selling Stockholders received such shares in connection with Odetics' acquisition of Intelligent Controls Inc. ("ICI") through a

statutory merger (the "Merger") of ICI with and into Odetics. The Shares were issued pursuant to an exemption from the registration requirements of the Securities Act of 1933, as amended (the "Securities Act"), provided by Section 4(2) thereof. The Shares are being registered by the Company pursuant to registration rights granted by the Company to the Selling Stockholders. The Company has agreed to bear certain expenses (other than selling commissions and fees and expenses of counsel and other advisers to certain of the Selling Stockholders) in connection with the registration of the Shares.

The Shares may be offered by the Selling Stockholders, or by pledgees, donees, transferees or other successors in interest, from time to time in transactions in the over-the-counter market, in negotiated transactions, or a combination of such methods of sale, at fixed prices which may be changed, at market prices prevailing at the time of sale, at prices related to prevailing market prices or at negotiated prices. The Selling Stockholders, or their pledgees, donees, transferees or other successors in interest, may effect such transactions by selling the Shares to or through broker-dealers, and such broker-dealers may receive compensation in the form of discounts, concessions or commissions from the Selling Stockholders, or their pledgees, donees, transferees or other successors in interest, and/or the purchasers of the Shares for whom such broker-dealers may act as agents or to whom they sell as principals (which compensation as to a particular broker-dealer might be in excess of customary commissions). See "Distribution or Sale of the Shares."

The Company will not receive any part of the proceeds from sales of the Shares by the Selling Stockholders. See "Use of Proceeds."

The Common Stock offered hereby has a high degree
of risk. See "Risk Factors" beginning on page 4.

The Company's Class A Common Stock is quoted on the Nasdaq National Market under the symbol "ODETA." On November 10, 1997, the last reported sale price of the Company's Class A Common Stock on the Nasdaq National Market was \$7.1875 per share.

The Selling Stockholders and any broker-dealers or agents that participate with the Selling Stockholders in the distribution of the Shares may be deemed to be "underwriters" within the meaning of Section 2(11) of the Securities Act, and any commissions received by them and any profit on the resale of the Shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. See "Distribution or Sale of the Shares" herein for a description of indemnification arrangements.

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.

The date of this Prospectus is November __, 1997

No person has been authorized to give any information or to make any representations other than those contained in this Prospectus in connection with the offering made hereby, and if given or made, such information or representations must not be relied upon as having been authorized by the Company, any Selling Stockholder or by any other person. Neither the delivery of this Prospectus nor any sale made hereunder shall, under any circumstances, create any implication that information herein is correct as of any time

subsequent to the date hereof. This Prospectus does not constitute an offer to sell or a solicitation of an offer to buy the Shares to any person or by anyone in any jurisdiction in which such offer or solicitation may not lawfully be made.

AVAILABLE INFORMATION

The Company is subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and in accordance therewith files annual and quarterly reports, proxy statements and other information with the Securities and Exchange Commission (the "Commission"). Such reports, proxy statements and other information may be inspected, and copies of such material may be obtained at prescribed rates, at the Commission's Public Reference Section, Room 1024, 450 Fifth Street, N.W., Washington D.C. 20549, as well as at the Commission's regional offices at Seven World Trade Center, 13th Floor, New York, New York 10048, and Northwestern Atrium Center, 500 West Madison Street, Suite 1400, Chicago, Illinois 60661. Copies of such material can also be obtained from the Public Reference Branch of the Commission at 450 Fifth Street, N.W., Washington, D.C. 20549 at prescribed rates. The Commission also maintains a web site that contains reports, proxy and information statements and other information regarding registrants, such as the Company, that file electronically with the Commission and the address is <http://www.sec.gov>. Reports, proxy statements and other information concerning the Company may also be inspected at the National Association of Securities Dealers, Inc. at 1735 K Street, N.W., Washington, D.C. 20006.

The Company has filed with the Commission a registration statement on Form S-3 (herein, together with all amendments and exhibits, referred to as the "Registration Statement") under the Securities Act, with respect to the Common Stock offered hereby. This Prospectus, which is part of the Registration Statement, does not contain all of the information set forth in the Registration Statement, certain parts of which are omitted in accordance with the rules and regulations of the Commission. For further information with respect to the Company and the Shares offered hereby, reference is hereby made to the Registration Statement. Statements contained in this Prospectus concerning the provisions of any documents referred to are not necessarily complete, and each such statement is qualified in its entirety by reference to the copy of such document filed with the Commission.

INFORMATION INCORPORATED BY REFERENCE

The following documents filed with the Commission are hereby incorporated by reference in this Prospectus:

- (i) the Annual Report of the Company on Form 10-K for the year ended March 31, 1997;
- (ii) the Quarterly Reports of the Company on Form 10-Q for the quarters ended June 30, 1997 and September 30, 1997;
- (iii) the definitive Proxy Statement filed with the Commission on July 29, 1997 in connection with the Company's Annual Meeting of Stockholders;
- (iv) the Current Report of the Company on Form 8-K filed with the Commission on November 14, 1997; and
- (v) the description of the Company's Class A Common Stock contained in its Registration Statement on Form 8-B filed with the Commission on October 14, 1987, including any amendment or report filed for the purpose of updating such description.

All reports and other documents subsequently filed by the Company pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this Prospectus and prior to the termination of this offering shall be deemed to be incorporated by reference herein and to be a part hereof from the date of filing

of such reports and

documents. Any statement incorporated 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 which 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 this Prospectus.

The Company will provide without charge to each person to whom 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 (other than exhibits to such documents, unless such exhibits are specifically incorporated by reference into such document). Requests for such documents should be submitted in writing to Gregory A. Miner, Chief Financial Officer, at Odetics, Inc., 1515 South Manchester Avenue, Anaheim, California 92802, or by telephone at (714) 774-5000.

THE COMPANY

Odetics was founded in 1969 to supply digital recorders for use in the United States space program. Odetics pioneered new designs and standards for digital magnetic tape recorders offering enhanced performance in the adverse environments attendant to space flight, high reliability and long product life. In the 1970s, Odetics broadened its information automation product line to include time-lapse video cassette recorders for commercial and industrial security and surveillance applications. Through Odetics' GYYR Division, it became a leading supplier of time-lapse videotape cassette recorders, digital image processing modules and related products used in security and surveillance systems.

In the early 1980s, Odetics set out to develop the technical expertise to apply automation to new commercial applications. As part of its initial development efforts, Odetics built ODEX, a prototype six-legged walking robot now part of the Smithsonian Institution's permanent collection of historically significant technology. Odetics established the Broadcast Division which pioneered the use of large library cart machines in broadcast television stations and satellite uplink operations. The Broadcast Division is a leading supplier of broadcast automation control systems in the United States.

The success of Odetics' cart machines led Odetics to pursue new applications for information automation technologies, and in 1990, Odetics teamed with E-Systems, Inc. ("E-Systems") to develop and provide a 19mm automated tape cartridge handling subsystem for E-Systems' EMASS mainframe computer tape library for the United States Government. In 1991, in a strategic move to expand its business into new and potentially larger markets, Odetics introduced an automated tape handling subsystem for integration into tape libraries designed for midrange computers and client/server networks employing IBM 3480 and similar industry standard tape cartridges. In January 1993, Odetics formed a separate subsidiary, ATL Products, Inc. ("ATL") to pursue the market for automated tape libraries.

On March 10, 1997, ATL completed an initial public offering of 1,650,000 shares of its Class A Common Stock. Upon completion of this offering, Odetics beneficially owned 82.9% of the outstanding Class A Common Stock of ATL. On October 31, 1997, Odetics distributed to its stockholders all of its shares of Class A Common Stock of ATL.

During fiscal 1997, Odetics formed a wholly-owned subsidiary, Gyyr, Inc. ("Gyyr"), to operate the business of its former GYYR division.

On October 29, 1997, Odetics acquired ICI, a company that designs, manufactures and markets products used in building access and management.

Odetics' headquarters are located in Anaheim, California, with additional

operations in Europe and Asia. Odetics' principal executive offices are located at 1515 South Manchester Avenue, Anaheim, California 92802, and its telephone number at that location is (714) 774-5000.

RISK FACTORS

In addition to the other information in this Prospectus, the following Risk Factors should be considered carefully in evaluating an investment in the shares of Common Stock offered by this Prospectus. Except for the historical information contained herein, the matters discussed in this Prospectus are forward-looking statements which involve risk and uncertainties, including but not limited to economic, competitive, governmental and technological factors affecting the Company's operations, markets, products, services and prices and other factors discussed in the Company's filings with the Commission.

Acquisition-Related Risks

The ICI acquisition will present the Company with numerous challenges, including difficulties in the assimilation of the operations, technologies and products of ICI and managing separate geographic operations. The process of integrating ICI's business into the Company's operations may result in unforeseen operating difficulties and expenditures and may absorb significant management attention that would otherwise be available for the ongoing development of the Company's business. If the Company's management does not respond to these challenges effectively, the Company's results of operations could be adversely affected. Moreover, there can be no assurance that the anticipated benefits of the ICI acquisition will be realized.

Odetics has not previously operated a division for building access and management products. There can be no assurance that such business can be integrated successfully with Odetics' other business, that there will be any operating efficiencies between the businesses, or that the combined businesses can be operated profitably. The failure to integrate and operate Odetics' and ICI's businesses and other future acquired companies successfully could have a material adverse effect on Odetics' business and future prospects.

As part of its ongoing strategy, Odetics may acquire additional complementary businesses and Odetics' success will be partially dependent upon its ability to manage and integrate the operations of such acquired entities. There can be no assurance that Odetics will be successful in identifying, acquiring, managing or integrating additional operations. Moreover, there can be no assurance that the acquisition by Odetics of complementary businesses will not adversely affect Odetics' relationships with existing or potential customers in the same or similar businesses. In addition, growth through acquisitions may place significant demands on Odetics' management and other resources. As a result, there can be no assurance that future acquisitions will not adversely affect Odetics' business and future prospects.

Fluctuations in Quarterly Operating Results.

Odetics has experienced wide fluctuations in quarterly and annual operating results in the past and may continue to experience fluctuations in the future based on a number of factors, not all of which are in the Company's control. These factors include, without limitation, the size and timing of significant customer orders; the introduction of new products by competitors; the availability of components used in the manufacturing of the Company's products; the expenditure of substantial funds for research and development for its subsidiaries and divisions; changes in pricing policies by the Company, its suppliers or its competitors and increased price competition; the ability of the Company to develop, introduce, market and gain market acceptance of new products, applications and product enhancements in a timely manner and to control costs; the Company's success in expanding and implementing its sales and marketing programs; technological changes in the networked computing market and the other markets in which the Company operates; the reduction in revenues from government programs; the relatively thin level of backlog at any given time; the

mix of sales among the Company's channels; deferrals of customer orders in anticipation of new products, applications or product enhancements; currency fluctuations; and general economic and market conditions. Moreover, the Company's sales in any quarter typically consist of a relatively small number of large customer orders, in which the timing of a small number of orders can impact quarter to quarter results. The loss of or a substantial reduction in orders from any significant customer could have a material adverse effect on the Company's business, financial condition and results of operations. Odetics' growth in revenues in recent periods may not be sustainable and may not be indicative of future operating results and there can be no assurance that the Company will continue

to achieve profitability on a quarterly or annual basis in the future. Due to all of the foregoing factors and other risks discussed below, it is possible that in some future period the Company's operating results may be below the expectations of analysts and investors. In such event, the market price of the Company's securities would probably be materially and adversely affected.

Dependence on Sole Source Suppliers.

Odetics purchases numerous parts, supplies and other components used in its products from various independent suppliers, some of whom are the sole suppliers for certain parts and components. Odetics currently relies on a single supplier for the principal component of Gyr's time-lapse videotape cassette recorders. Odetics has not been able to secure any guarantee of the future supply of its sole sourced components. The disruption or termination of the supply of any of the Company's outsourced components for any reason would have a material adverse effect on the Company's business, financial condition and results of operations.

Rapid Technological Change; Effect of New Product Introductions.

The markets served by the Company are characterized by rapid technological advances, downward price pressure in the marketplace as technologies mature, changes in customer requirements, frequent new product introductions and enhancements, and evolving industry standards. Odetics' business requires substantial ongoing research and development efforts and expenditures, and its future success will depend on its ability to enhance its current products, reduce product costs and develop and introduce new products which incorporate the latest technological advancements in hardware, storage media, operating system software and applications software in response to evolving customer requirements. Odetics' failure to anticipate or respond adequately to technological developments and changing customer requirements, the occurrence of significant delays in new product development or introduction or the failure of any new products to gain market acceptance could impair the Company's competitiveness and could materially and adversely affect the Company's business, financial condition and results of operations. There can be no assurance that the Company will be able to introduce new products or enhancements to existing products on a timely basis, if at all, or the effect to which such introductions will have on sales of existing products. To the extent new products are introduced, they may contain undetected design faults and software errors, or "bugs," when first released by the Company that, despite testing by the Company, are discovered only after a product has been installed and used by customers. Although the Company has not experienced any material adverse effect resulting from any such faults or errors to date, there can be no assurance that faults or errors in the Company's existing products or in new products introduced by the Company will not be discovered in the future, causing delays in product introduction and shipments or requiring design modifications that could adversely affect the Company's competitive position and results of operations.

Competition.

Odetics competes in each of its markets with numerous other companies, many of which have far greater name recognition and financial, technological, marketing and customer service resources than the Company and may be able to

respond more quickly to new or emerging technologies and changes in customer requirements, or devote greater resources to the development, promotion, sale and support of their products than the Company. The principal competitive factors in the markets in which the Company participates are product quality and performance, price, reliability, upgradeability, service and technical support. There can be no assurance that the Company will be able to compete effectively in the markets for its products. Increased competition is likely to result in price reductions, reduced gross margins and loss of market share, any of which could have a material adverse affect upon the Company's business, operating results and financial condition.

Risks Associated with International Sales.

International product sales represented approximately 12% and 17% of the Company's net sales during fiscal 1996 and 1997, respectively. Odetics believes that international sales will continue to represent a significant portion of its revenues, and that continued growth and profitability will require further expansion of its international

5

operations. Odetics' international sales are currently denominated primarily in U.S. dollars, and an increase in the relative value of the dollar could make the Company's products more expensive and, therefore, potentially less price competitive in international markets. Additional risks inherent in international business activities generally include: unexpected changes in regulatory requirements, tariffs and other trade barriers, longer accounts receivable payment cycles, difficulties in managing and staffing international operations, potentially adverse tax consequences, including restrictions on the repatriation of earnings, the burdens of compliance with a wide variety of foreign laws, currency fluctuations and political and economical instability. Odetics does not engage in any transactions as a hedge against risks of loss due to foreign currency fluctuations. There can be no assurance that such factors will not have a material adverse effect on the Company's future international sales and consequently, the Company's business, operating results and financial condition. Furthermore, as the Company increases its international sales, its total revenues may also be affected to a greater extent by seasonal fluctuations resulting from lower sales that typically occur during the summer months in Europe and other parts of the world.

Dependence on Key Personnel.

Odetics' future performance depends to a significant extent on its senior management and other key employees, in particular Joel Slutzky, the Company's Chief Executive Officer. The loss of the services of Mr. Slutzky would have a material adverse effect on the Company's development and marketing efforts. Odetics' future success will also depend in large part upon its ability to attract, retain and motivate highly skilled employees. Competition for such employees, particularly development engineers, is intense, and there can be no assurance that the Company will be able to continue to attract and retain sufficient numbers of such highly skilled employees. Odetics' inability to attract and retain additional key employees or the loss of one or more of its current key employees could have a material adverse effect upon the Company's business, financial condition and results of operations.

Dependence on Proprietary Technology; Risks of Infringement.

Odetics' ability to compete effectively depends in part on its ability to develop and maintain proprietary aspects of its technology which the Company attempts to protect with a combination of patent, copyright, trademark and trade secret laws, employee and third party nondisclosure agreements and similar means. Such rights may not preclude competitors from developing substantially equivalent or superior products to the Company's products. In addition, the laws of some foreign countries do not protect the Company's proprietary rights as fully as do the laws of the United States. There can be no assurance that the Company's means of protecting its proprietary rights in the United States or abroad will be adequate, that future patents will be issued, or that competitors

will not independently develop technologies that are similar or superior to the Company's technology, duplicate the Company's technology, or design around any patent of the Company. Moreover, litigation may be necessary in the future to enforce the Company's intellectual property rights, to determine the validity and scope of the proprietary rights of others, or to defend the Company against claims of infringement or invalidity by others. An adverse outcome in such litigation or similar proceedings could subject the Company to significant liability to third parties, require disputed rights to be licensed from others or require the Company to cease marketing or using certain products, any of which could have a material adverse effect on the Company's business, financial condition and results of operations. If the Company is required to obtain licenses under patents or proprietary rights of others, there can be no assurance that any required licenses would be made available on terms acceptable to the Company, if at all. In addition, the cost of addressing any intellectual property litigation claim, both in legal fees and expenses and the diversion of management resources, regardless of whether the claim is valid, could be significant and could have a material adverse effect on the Company's results of operations.

Concentration of Ownership.

As of June 26, 1997, the Company's officers and directors beneficially owned a majority of the total combined voting power of the outstanding shares of Class A Common Stock and Class B Common Stock. As a result of their stock ownership, management will be able to significantly influence the election of the Company's directors and the outcome of corporate actions requiring stockholder approval, such as mergers and acquisitions, regardless of how other stockholders of the Company may vote. This concentration of voting control may have a significant effect in

6

delaying, deferring or preventing a change in management or change in control of the Company and may adversely affect the voting or other rights of other holders of Common Stock.

ATL Distribution.

On October 31, the Company distributed to its stockholders all of the shares of Class A Common Stock of ATL owned by the Company. Prior to this distribution, the Company owned approximately 82.9% of the Class A Common Stock of ATL. There can be no assurance that the spinoff of ATL from the Company will not adversely affect the remaining operations of the Company and its subsidiaries.

Anti-Takeover Effect of Charter Provisions, Bylaws and Stock Structure.

Odetics has two classes of Common Stock which are substantially identical, other than with respect to voting power. The Class A Common Stock offered hereby entitles the holder to 1/10th vote per share and Class B Common Stock entitles the holder to one vote per share, with concentration of ownership of the Class B Common Stock in the Company's officers and directors and their affiliates. In addition, the Company's Board is elected annually on a split vote basis, with the holders of Class A Common Stock currently being entitled to elect two of the directors and holders of the Class B Common Stock currently being entitled to elect the remaining six directors. These provisions could have the effect of discouraging a proxy contest or making it more difficult for a third party acquiring a substantial block of the Company's Common Stock to effect a change in management and control of the Company. Such provisions also could limit the price that investors might be willing to pay in the future for shares of the Company's Common Stock.

The Odetics Board is authorized to issue, without stockholder approval, up to 2,000,000 shares of Preferred Stock with voting, conversion and other rights and preferences, as well as additional shares of Common Stock, which could adversely affect the voting power or other rights of the holders of Class A Common Stock. Although the Company has no current plans to issue any shares of Preferred Stock

or additional shares of Common Stock other than the Class A Common Stock offered hereby, the future issuance of Preferred Stock or Common Stock or of rights to purchase Preferred Stock or Common Stock could be used to discourage an unsolicited acquisition proposal.

Future Capital Needs; Uncertainty of Additional Funding.

Odetics anticipates that its existing capital resources and credit facilities will be adequate to satisfy its capital requirements for at least the next twelve months. However, Odetics' future capital requirements may change depending on a number of factors and no assurance can be given that additional financing will be available to Odetics or that, if available, such financing can be obtained on terms favorable to Odetics and its stockholders. The lack of availability of adequate funds could adversely affect Odetics' business and future prospects.

Shares Eligible for Future Sales; Registration of Shares.

Future sales of Odetics Common Stock in the public market following the Merger could adversely affect the market price of such stock. Pursuant to the Merger Agreement, Odetics has agreed to cause a registration statement on the appropriate form to be filed with the Commission covering the Shares. However, such registration statement may be required to be amended or suspended from time to time due to various matters including activities undertaken by Odetics in good faith and for valid business reasons such as the acquisition of third parties or the divestiture of assets during which periods the former ICI shareholders who hold shares of Odetics Class A Common Stock issued in the Merger will not be entitled to sell their stock under such registration statement. There can be no assurance that a registration statement will be in effect at any particular time during which a holder of Odetics Class A Common Stock desires to sell such stock.

Volatility of Stock Price.

The trading price of the Company's Common Stock could be subject to wide fluctuations in response to quarterly variations in operating results, shortages announced by suppliers, announcements of technological innovations or new products, applications or product enhancements by the Company or its competitors, changes in financial estimates by securities analysts and other events or factors. In addition, the stock market has experienced volatility which has particularly affected the market prices of equity securities of many high technology companies and which often has been unrelated to the operating performance of such companies. These broad market fluctuations may adversely affect the market price of the Company's securities.

USE OF PROCEEDS

The Company will not receive any of the proceeds from the sale of Shares by the Selling Stockholders. See "Selling Stockholders."

SELLING STOCKHOLDERS

The following table sets forth the number of shares of Class A Common Stock beneficially owned by each of the Selling Stockholders. Except as indicated, no Selling Stockholder has had a material relationship with the Company within the past three years other than as a result of the ownership of the Shares. Because (i) the Selling Stockholders may offer all or some of the Shares which they hold pursuant to the offering contemplated hereby, and (ii) there are currently no agreements, arrangements or understandings with respect to the sale of any of the Shares, no estimate can be given as to the amount of Shares that will be held by the Selling Stockholders after completion of this offering. See "Distribution or Sale of the Shares."

The Shares being offered pursuant to this Prospectus by the Selling Stockholders were acquired from the Company in connection with its acquisition

of ICI. At the time of the acquisition, each Selling Stockholder represented to the Company that it was acquiring its Shares without any present intention of effecting a distribution of those Shares. However, in accordance with an agreement entered into with a representative of the Selling Stockholders at the time of the ICI acquisition, the Company agreed to effect a shelf registration (of which this Prospectus is a part) of all Shares in order to permit the Selling Stockholders to effect sales of such Shares from time to time in the market or in privately-negotiated transactions. The Company will prepare and file such amendments and supplements to the Registration Statement as may be necessary in accordance with the rules and regulations of the Securities Act to keep it effective until the earlier to occur of the following events: (i) twenty-four (24) months have elapsed since the consummation of the Merger; (ii) all Shares have been sold pursuant to the Registration Statement; or (iii) all Shares held by each Selling Stockholder can be sold by such stockholder in a three month period pursuant to Rule 144 under the Securities Act.

The Shares offered by this Prospectus may be offered from time to time by the Selling Stockholders named below:

Name of Selling Stockholder - - - - -	Number of Shares Beneficially Owned (1) -----	Number of Shares Being Offered (1) (2) -----	Percent of Outstanding Shares -----
Joe Agostino	494	494	*
Wes R. Appleby	19	19	*
Duane Baker	6,329	6,329	*
Randall E. Baker	118	118	*
Frank N. Bill	13,286	13,286	*
Robert M. Bridgforth, Jr.	672	672	*
Frank W. Brockman, Jr.	1,186	1,186	*

8

Name of Selling Stockholder - - - - -	Number of Shares Beneficially Owned (1) -----	Number of Shares Being Offered (1) (2) -----	Percent of Outstanding Shares -----
B-T Development Co.	1,582	1,582	*
Rinaldo M. Carosino and Lorraine I. Carosino	494	494	*
James E. Clark	19	19	*
Vincent Coluccio	197	197	*
Brad C. Davis	1,265	1,265	*
Melvin O. Eide	791	791	*
Trudy A. Francis	158	158	*
James E. Frazier	19	19	*
Gary W. Goldstein	395	395	*
Edwin Gordon	791	791	*
Paul Griffith	53	53	*
Richard L. Hammel	118	118	*
George W. Steers, Personal Representative for the Estate of Cecil F. Hanna	791	791	*
Rick Helbert	791	791	*
Bruce N. Holliday	395	395	*
Claire Holliday	395	395	*
William M. Holliday and Betty N. Holliday as Tenants in Common	3,164	3,164	*
Jeffrey L. Hovorka	138	138	*
Robert M. Jewett	791	791	*
Ronald I. Katzin	2,307	2,307	*
Phillip L. Keck	5,973	5,973	*
Walter P. Kistler	3,560	3,560	*
Richard W. Klein	1,186	1,186	*
Gerald E. Koch and Ann J. Koch	791	791	*
Jack H. Koegel	791	791	*
Jeffrey R. Kruse	830	830	*
Melissa A. Law	118	118	*
Albert Roger LeMay and Cynthia Lois LeMay,	494	494	*

Trustees, or their successors in trust, under the Albert and Cynthia LeMay Living Trust dated January 20, 1997

Brian J. Mallabon	5,863	5,863	*
Thomas J. Marcure	158	158	*
Estate of Edward E. Murray	791	791	*
Liem Ngo	118	118	*
Torg Olsen and Maris Olsen, Co-executors of the Estate of Shirley B. Olsen	197	197	*
Robert R. Percival	109,747	109,747	2
Richard Roadenizer	989	989	*
Jay D. Roeter and Joan I. Roeter	791	791	*
Helen M. Roulst	791	791	*
Jim L. & Helen M. Roulst	494	494	*
Erling E. Sams	39	39	*

9

Name of Selling Stockholder -----	Number of Shares Beneficially Owned (1) -----	Number of Shares Being Offered (1) (2) -----	Percent of Outstanding Shares -----
Ronald B. Stein	751	751	*
Ronald L. Sturtz	791	791	*
Thomas L. Thompson	415	415	*
Alan J. Veigel	553	553	*
G. Roger Victor	791	791	*
Geralyn K. Wilson	79	79	*
TOTAL	173,859	173,859	

* Less than 1%.

- (1) Each Selling Stockholder's Shares include the maximum number of Shares that may be distributed to the Selling Stockholder from an escrow fund established pursuant to that certain Indemnity Escrow Agreement dated as of October 29, 1997 by and among the Company, ICI, Northwestern Trust and Investors Advisory Company, and Richard W. Klein (the "Indemnity Escrow Agreement") to pay for potential indemnification claims that may be asserted against such stockholder pursuant to the Indemnity Escrow Agreement and that certain Agreement and Plan of Merger dated as of October 9, 1997 by and among the Company, ICI, Robert R. Percival and Sylvia H. Percival.
- (2) This Registration Statement shall also cover any additional shares of Common Stock which become issuable in connection with the Shares registered for sale hereby by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the receipt of consideration which results in an increase in the number of the Company's outstanding shares of Common Stock.

The Company has agreed to bear certain expenses (other than selling commissions and fees and expenses of counsel and other advisors to certain of the Selling Stockholders) in connection with the registration of the Shares.

10

DISTRIBUTION OR SALE OF THE SHARES

The Shares offered hereby are being offered directly by the Selling Stockholders. The Company will not receive any proceeds from the sale of any of the Shares by the Selling Stockholders. The sale of the Shares may be effected by the Selling Stockholders, or by pledgees, donees, transferees or other successors in interest, from time to time in transactions in the over-the-counter market, on the Nasdaq National Market, in negotiated transactions, or a combination of such methods of sale, at fixed prices which may be changed, at

market prices prevailing at the time of sale, at prices related to prevailing market prices or at negotiated prices. The Selling Stockholders, or their pledgees, donees, transferees or other successors in interest, may effect such transactions by selling the Shares to or through broker-dealers, and such broker-dealers may receive compensation in the form of discounts, concessions or commissions from the Selling Stockholders, their pledgees, donees, transferees or other successors in interest, and/or the purchasers of the Shares for whom such broker-dealers may act as agents or to whom they sell as principals (which compensation as to a particular broker-dealer might be in excess of customary commissions).

At the time a particular offer of Shares is made, to the extent required, a supplemental Prospectus will be distributed which will set forth the number of Shares being offered and the terms of the offering including the name or names of any underwriters, dealers or agents, the purchase price paid by any underwriter for the Shares purchased from the Selling Stockholders, any discounts, commissions and other items constituting compensation from the Selling Stockholders and any discounts, commissions or concessions allowed or reallocated or paid to dealers.

In order to comply with the securities laws of certain states, if applicable, the Shares will be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in certain states the Shares may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with by the Company and the Selling Stockholders.

The Selling Stockholders and any broker-dealers, agents or underwriters that participate with the Selling Stockholders in the distribution of the Shares may be deemed to be "underwriters" within the meaning of Section 2(11) of the Securities Act, and any commissions received by them and any profit on the resale of the Shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the Shares may not simultaneously engage in market making activities with respect to the Common Stock of the Company for a period of two business days prior to the commencement of such distribution. In addition and without limiting the foregoing, each Selling Stockholder will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including, without limitation, Rules 10b-6 and 10b-7, which provisions may limit the timing of purchases and sales of shares of the Company's Common Stock by the Selling Stockholders.

The Shares were originally issued to former shareholders of ICI in connection with the statutory merger of ICI with and into the Company pursuant to an exemption from the registration requirements of the Securities Act. The Company has agreed to register the Shares under the Securities Act and to indemnify and hold certain Selling Stockholders harmless against certain liabilities under the Securities Act that could arise in connection with the sale by the Selling Stockholders of the Shares.

There can be no assurance that the Selling Stockholders will sell all or any of the shares of the Class A Common Stock offered hereunder.

MATERIAL CHANGES

On October 31, the Company distributed to its stockholders all of the shares of Class A Common Stock of ATL owned by the Company. Prior to this distribution, the Company owned approximately 82.9% of the Class A Common Stock of ATL. ATL's Class A Common Stock is quoted on the Nasdaq National Market under the symbol "ATLPA." On November 10, 1997, the last reported sale price of ATL's Class A Common Stock on the Nasdaq

National Market was \$10.00 per share. Each stockholder of the Company received approximately 1.1 shares of ATL Class A Common Stock for each share of Odetics Class A Common Stock held by such stockholder.

INDEMNIFICATION OF DIRECTORS AND OFFICERS

Under Section 145 of the Delaware General Corporation Law, the Company can indemnify its directors and officers against liabilities they may incur in such capacities, including liabilities under the Securities Act. The Company's Bylaws provide that the Company will indemnify its directors and officers to the fullest extent permitted by law and require the Company to advance litigation expenses upon receipt by the Company of an undertaking by the director or officer to repay such advances if it is ultimately determined that the director or officer is not entitled to indemnification. The Bylaws further provide that rights conferred under such Bylaws do not exclude any other right such persons may have or acquire under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise.

The Company's Certificate of Incorporation provides that, pursuant to Delaware law, its directors shall not be liable for monetary damages for breach of the directors' fiduciary duty of care to the Company and its stockholders. This provision in the Certificate of Incorporation does not eliminate the duty of care, and in appropriate circumstances equitable remedies such as injunctive or other forms of non-monetary relief will remain available under Delaware law. In addition, each director will continue to be subject to liability for breach of the director's duty of loyalty to the Company or its stockholders, for acts or omissions not in good faith or involving intentional misconduct or knowing violations of law, for actions leading to improper personal benefit to the director, and for payment of dividends or approval of stock repurchases or redemptions that are unlawful under Delaware law. The provision also does not affect a director's responsibilities under any other law, such as the federal securities laws or state or federal environmental laws.

The Company has entered into agreements to indemnify its directors and certain of its officers in addition to the indemnification provided for in the Certificate of Incorporation and Bylaws. These agreements, among other things, indemnify the Company's directors and certain of its officers for certain expenses (including attorneys' fees), judgments, fines and settlement amounts incurred by such person in any action or proceeding, including any action by or in the right of the Company, on account of services as a director or officer of the Company, or as a director or officer of any other company or enterprise to which the person provides services at the request of the Company.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing provisions, or otherwise, the Company has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Company of expenses incurred or paid by a director, officer or controlling person of the Company 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 Company 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 Securities Act and will be governed by the final adjudication of such issue.

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for the Company by Brobeck, Phleger & Harrison LLP, Newport Beach, California.

The Consolidated Financial Statements and related Financial Statement Schedule of Odetics, Inc. as of March 31, 1997 and for each of the three years in the period ended March 31, 1997 appearing in the Company's Annual Report on Form 10-K for the year ended March 31, 1997, which are incorporated by reference, have been audited by Ernst & Young LLP, independent auditors, as stated in their reports which are incorporated by reference, and have been so incorporated in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

13

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the various expenses in connection with the sale or the distribution of the securities being registered, other than underwriting discounts and commissions and finder's fees. All of the amounts shown are estimates except for the Securities and Exchange Commission registration fee and the Nasdaq National Market additional listing fee.

Securities and Exchange Commission registration fee...	\$ 382
Nasdaq National Market additional listing fee.....	3,478
Accounting fees and expenses.....	3,000
Legal fees and expenses.....	15,000
Miscellaneous.....	5,000

Total.....	\$26,860
	=====

Item 15. Indemnification of Directors and Officers.

Under Section 145 of the Delaware General Corporation Law, the Company can indemnify its directors and officers against liabilities they may incur in such capacities, including liabilities under the Securities Act. The Company's Bylaws provide that the Company will indemnify its directors and officers to the fullest extent permitted by law and require the Company to advance litigation expenses upon receipt by the Company of an undertaking by the director or officer to repay such advances if it is ultimately determined that the director or officer is not entitled to indemnification. The Bylaws further provide that rights conferred under such Bylaws do not exclude any other right such persons may have or acquire under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise.

The Company's Certificate of Incorporation provides that, pursuant to Delaware law, its directors shall not be liable for monetary damages for breach of the directors' fiduciary duty of care to the Company and its stockholders. This provision in the Certificate of Incorporation does not eliminate the duty of care, and in appropriate circumstances equitable remedies such as injunctive or other forms of non-monetary relief will remain available under Delaware law. In addition, each director will continue to be subject to liability for breach of the director's duty of loyalty to the Company or its stockholders, for acts or omissions not in good faith or involving intentional misconduct or knowing violations of law, for actions leading to improper personal benefit to the director, and for payment of dividends or approval of stock repurchases or redemptions that are unlawful under Delaware law. The provision also does not affect a director's responsibilities under any other law, such as the federal securities laws or state or federal environmental laws.

The Company has entered into agreements to indemnify its directors and certain of its officers in addition to the indemnification provided for in the Certificate of Incorporation and Bylaws. These agreements, among other things, indemnify the Company's directors and certain of its officers for certain expenses (including attorneys' fees), judgments, fines and settlement amounts incurred by such person in any action or proceeding, including any action by or in the right of the Company, on account of services as a director or officer of the Company, or as a director or officer of any other company or enterprise to which the person provides services at the request of the Company.

II-1

Item 16. Exhibits.

Exhibit No.

- -----

5.1 Opinion of Brobeck, Phleger & Harrison LLP

23.1 Consent of Ernst & Young LLP, independent auditors

23.2 Consent of Brobeck, Phleger & Harrison LLP (included in Exhibit 5.1)

24.1 Power of Attorney. Reference is made to page II-4.

Item 17. Undertakings.

The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended;

(ii) To reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment hereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering price may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement.

Provided, however, that paragraphs (i) and (ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the Company pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended, that are incorporated by reference in this Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any

of the securities being registered which remain unsold at the termination of the offering.

The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Company's Annual Report pursuant to Section 13(a) or Section 15(d) of the Exchange Act that is incorporated by reference into this Registration Statement shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

II-2

The undersigned Registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance under Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4), or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, as amended, 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.

II-3

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, 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 Anaheim, State of California, on November 19, 1997.

ODETICS, INC.

By: /s/ Joel Slutzky

Joel Slutzky
Chairman and Chief Executive Officer

We, the undersigned officers and directors of Odetics, Inc. do hereby constitute and appoint Joel Slutzky and Gregory A. Miner, and each of them, our true and lawful attorneys-in-fact and agents, each with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments and any amendment pursuant to Rule 462(b) of the Securities Act of 1933 which may be deemed to be a new registration statement) to this Registration Statement, and to file the same, with 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 or necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement on Form S-3 has been signed below by the following persons in the capacities and on the date indicated.

Signature -----	Title -----	Date ----
/s/ Joel Slutzky ----- Joel Slutzky	Chairman, Chief Executive Officer and Director (Principal Executive Officer)	November 19, 1997
/s/ Gregory A. Miner ----- Gregory A. Miner	Vice President and Chief Financial Officer (Principal Financial Officer)	November 19, 1997
/s/ Gary Smith ----- Gary Smith	Vice President and Corporate Controller (Principal Accounting Officer)	November 19, 1997
/s/ Crandall Gudmundson ----- Crandall Gudmundson	President and Director	November 19, 1997
/s/ Jerry Muench ----- Jerry Muench	Vice President and Director	November 19, 1997
/s/ Kevin C. Daly ----- Kevin C. Daly	Director	November 19, 1997

II-4

Signature -----	Title -----	Date ----
/s/ Ralph R. Mickelson ----- Ralph R. Mickelson	Director	November 19, 1997
/s/ Stanley Molasky ----- Stanley Molasky	Director	November 19, 1997
/s/ Leo Wexler ----- Leo Wexler	Director	November 19, 1997
/s/ Paul E. Wright ----- Paul E. Wright	Director	November 19, 1997

II-5

ODETICS, INC.

Index to Exhibits

5.1 Opinion of Brobeck, Phleger & Harrison LLP

23.1 Consent of Ernst & Young LLP, independent auditors

23.2 Consent of Brobeck, Phleger & Harrison LLP (included in Exhibit 5.1)

24.1 Power of Attorney. Reference is made to page II-4.

November 19, 1997

Odetics, Inc.
1515 South Manchester Avenue
Anaheim, California 92802

Ladies and Gentlemen:

We have acted as counsel to Odetics, Inc., a Delaware corporation (the "Company"), in connection with its registration of 173,859 shares of Class A Common Stock (the "Common Stock") as described in the Company's Registration Statement on Form S-3 filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Registration Statement").

We are familiar with the corporate proceedings taken by the Company in connection with the issuance and sale of the Common Stock and it is our opinion that the Common Stock is duly authorized and will be, upon conclusion of the proceedings being taken by the Company prior to the issuance of all such Common Stock pursuant to the Agreement and Plan of Merger dated as of October 9, 1997 by and among the Company, Intelligent Controls Inc., Robert R. Percival and Sylvia H. Percival and upon completion of the proceedings being taken in order to permit such transactions to be carried out in accordance with the various states where required, validly issued, fully paid and nonassessable.

We consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement and to the reference to this firm under the caption "Legal Matters" in the Prospectus which is part of the Registration Statement.

Very truly yours,

/s/ BROBECK, PHLEGER & HARRISON LLP

BROBECK, PHLEGER & HARRISON LLP

Consent of Independent Auditors

We consent to the reference to our firm under the caption "Experts" in the Registration Statement (Form S-3) and related Prospectus of Odetics, Inc. for the registration of 173,859 shares of its Class A Common Stock and to the incorporation by reference therein of our report dated April 29, 1997, with respect to the consolidated financial statements and schedule of Odetics, Inc. included in its Annual Report (Form 10-K) for the year ended March 31, 1997, filed with the Securities and Exchange Commission.

/s/ ERNST & YOUNG LLP

Orange County, California
November 12, 1997