ARRHYTHMIA RESEARCH TECHNOLOGY INC /DE/
Form S-8
December 23, 2005
Table Of Contents

As filed with the Securities and Exchange Commission on December 23, 2005 Registration No. 333-_____

U.S. SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM S-8
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Arrhythmia Research Technology, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**72-0925679**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification Number)*

25 Sawyer Passway, Fitchburg, Massachusetts 01420; (978) 345-5000

(Address, including zip code, and telephone number, including area code, of registrant s principal executive offices)

ARRHYTHMIA RESEARCH TECHNOLOGY, INC. 2005 STOCK AWARD PLAN

(Full Title of the Plan)

_____

David A. Garrison
Chief Financial Officer
Arrhythmia Research Technology, Inc.
25 Sawyer Passway
Fitchburg, Massachusetts 01420

(Name and Address of Agent For Service)

(978) 345-5000

(Telephone Number, Including Area Code, of Agent For Service)

Copies To:

Kathleen L. Cerveny, Esq.
Dilworth Paxson LLP
1133 Connecticut Ave., Suite 620
Washington, DC 20036

Phone: (202) 452-0900
Facsimile: (202) 452-0930

CALCULATION OF REGISTRATION FEE

Title Of Securities To Be Registered	Amount To Be Registered	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount Of Registration Fee
Common Stock, $.01 par value	**100,000 shares (1)**	**$ 9.86 (2)**	**$ 986,000 (2)**	**$ 105.50**
Common Stock, $.01 par value	**100,000 shares (3)**	**(3)**	**(3)**	**(4)**

(1) Pursuant to Rule 416 under the Securities Act of 1933, as amended, an indeterminate amount of additional shares of Common Stock, which may become issuable pursuant to the anti-dilution provisions of the 2005 Stock Award Plan (the "Plan") are also being registered hereunder. The shares being registered consist of shares which may be issued from time to time under the Plan. No shares have been issued uner the Plan as of the date hereof.

(2) Estimated solely for the purpose of calculating the registration fee, pursuant to Rule 457(c) and (h)(1) under the Securities Act of 1933, as amended. The price per share and aggregate offering price are based on the average of high and low prices of Registrant s Common Stock as reported on the American Stock Exchange on December 20, 2005.

(3) Represents the same shares described in the line above, which may be resold by the holder.

(4) Pursuant to Rule 457(h)(3), no additional fee is payable since the Shares, which may be offered for resale, are the same shares being registered hereby upon their initial issuance pursuant to the Plan.

EXPLANATORY NOTE

This Registration Statement registers 100,000 shares of common stock of Arrhythmia Research Technology, Inc. (the Company) to be offered pursuant to the Company s 2005 Stock Award Plan. No shares have been issued under the Plan as of the date hereof.

The materials which follow Part I, up to but not including the page beginning Part II of this Registration Statement, constitutes a reoffer prospectus, prepared in accordance with the requirements of Part I of Form S-3, in accordance with General Instruction C of Form S-8. The reoffer prospectus may be utilized for the reoffer and resale of up to 100,000 shares of common stock to the extent acquired by certain affiliates of the Company pursuant to the 2005 Stock Award Plan. The amount of securities to be offered or resold by means of the reoffer prospectus by the designated selling securityholders may not exceed, during any three month period, the amount specified in Rule 144(e).

PART I

ITEM 1. PLAN INFORMATION

The Company will send or give document(s) containing the information specified in Part I to participants as specified by Rule 428(b)(1). These documents are not required to be filed as part of this Registration Statement.

ITEM 2. REGISTRANT INFORMATION AND EMPLOYEE PLAN ANNUAL INFORMATION

Upon written or oral request by a participant in the 2005 Stock Award Plan, the Company will provide any of the documents incorporated by reference into the Section 10(a) prospectus, without charge. Any document required to be delivered to the participants pursuant to Rule 428(b) will also be delivered without charge.

PROSPECTUS

ARRHYTHMIA RESEARCH TECHNOLOGY, INC.

100,000 Shares of Common Stock, Par Value $0.01 Per Share

Issuable Pursuant to the 2005 Stock Award Plan

This prospectus covers up to 100,000 shares (the Shares) of common stock, par value $.01 per share (the Common Stock), of Arrhythmia Research Technology, Inc., a Delaware corporation (the Company). Such Shares have been or may be acquired by certain persons who may be deemed to be affiliates of the Company, including employees, officers, directors and consultants to the Company. Such persons are referred to herein as the selling securityholders under the Arrhythmia Research Technology, Inc. 2005 Stock Award Plan of the Company (the 2005 Plan). Securities issued under the 2005 Plan to affiliates will be deemed control securities under Rule 144. In connection with such resales or reoffers for sale, certain employees, officers, directors of the Company and the brokers through whom such Shares may be sold may be deemed to be underwriters as that term is defined in Section 2(11) of the Securities Act of 1933, as amended (the Securities Act). See The Offering.

The Company s Common Stock is currently traded on the American Stock Exchange, or AMEX, under the symbol HRT. On December 20, 2005, the closing sale price of the Common Stock was $9.84.

The Shares may be offered by the selling securityholders from time to time through or to brokers on the AMEX, in the over-the-counter market or otherwise at prices acceptable to the selling securityholders. The Company will not receive any of the proceeds from the sale of the Shares pursuant to this prospectus. All costs incurred in connection with the registration of the Shares are being borne by the Company. See The Offering.

AN INVESTMENT IN THESE SECURITIES INVOLVES A HIGH DEGREE OF RISK.
SEE RISK FACTORS BEGINNING ON PAGE 7.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of the prospectus. Any respresentation to the contrary is a criminal offense.

The date of this prospectus is December 23, 2005.

AVAILABLE INFORMATION

The Company is subject to the informational requirements of the Securities Exchange Act of 1934, as amended, and under those requirements, it files reports and other information with the Securities and Exchange Commission, or SEC. The SEC maintains a website on the Internet that contains reports, proxy and information statements and other information regarding registrants, including our company, that file electronically with the SEC. The SEC s website address is www.sec.gov. In addition, our Securities Exchange Act filings may be inspected and copied at the SEC Public Reference Room located at 100 F Street, N.E., Washington, DC 20549; and at the SEC s regional offices at Citicorp Center, 500 West Madison Street, Room 1400, Chicago, IL 60661, and at 233 Broadway, New York, NY 10279. Copies of the material may also be obtained upon request and payment of the appropriate fee from the Public Reference Room of the SEC located at 100 F Street, N.E., Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

This prospectus is a part of a registration statement on Form S-8 (together with all amendments and exhibits referred to as the registration statement) filed by the Company with the SEC under the Securities Act of 1933. This prospectus omits certain of the information contained in the registration statement, and reference is hereby made to the registration statement for further information with respect to the Company and the shares offered. Any statements contained herein concerning the provisions of any document filed as an exhibit to the registration statement or otherwise filed with the SEC are not necessarily complete, and in each instance reference is made to the copy of such document as filed. Each such statement is qualified in its entirety by such reference.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The following documents filed with the SEC are hereby incorporated by reference in this prospectus:

Annual Report on Form 10-KSB for the fiscal year ended December 31, 2004, filed with the SEC on March 31, 2005;
Current Report on Form 8-K filed with the SEC on April 12, 2005;
Quarterly Report on Form 10-QSB filed with the SEC on May 16, 2005;
Quarterly Report on Form 10-QSB filed with the SEC on August 15, 2005;
Current Report on Form 8-K filed with the SEC on August 31, 2005;
Quarterly Report on Form 10-QSB filed with the SEC on November 14, 2005; and
The description of our Common Stock contained in our Registration Statement on Form 8-A, filed with the SEC on February 12, 1992, including any amendment or reports filed for the purpose of updating such description.

All reports and other documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act after the date of this prospectus and prior to the termination of this offering shall be deemed to be incorporated by reference in this prospectus and to be part hereof from the date of filing of such reports and other documents.

You may request a copy of these filings, at no cost, by writing to David A. Garrison, Chief Financial Officer, Arrhythmia Research Technology, Inc., 25 Sawyer Passway, Fitchburg, MA 01420, or by calling him at (978) 345-5000.

THE COMPANY

Company Overview

Arrhythmia Research Technology, Inc. (ART) was incorporated under the laws of the State of Louisiana in 1981 and reincorporated under the laws of the State of Delaware in 1987. ART is engaged in the development and licensing of medical software, which acquires data and analyzes electrical impulses of the heart to detect and aid in the treatment of potentially lethal arrhythmias. ART s patented products consist of signal-averaging electrocardiographic (SAECG) software. In 2002, ART completed an update to a Windows based version of its proprietary Predictor® series. Rather than restore a direct sales force, the intent is to market ART s product through licensing with original equipment manufacturers. No significant sales of the software were recorded in 2004 or 2005. We continue to seek to establish contracts with original equipment manufacturers for this product.

Sudden cardiac death afflicts over 400,000 individuals in the United States each year. These occurrences are due to sustained ventricular tachycardia (abnormally rapid heartbeat) or ventricular fibrillation (very fast, completely irregular heartbeat), which severely affect the capability of the heart s pumping chambers or ventricles. The electric signals that emanate from the heart are used to detect the presence of late potentials, which indicate the risk of life-threatening ventricular arrhythmias. The SAECG processes enable Late Potentials to be amplified and enhanced, while eliminating undesired electrical noise in these tests.

ART s wholly owned subsidiary, Micron Products, Inc. (Micron), is a manufacturer and distributor of silver plated and non-silver plated conductive resin sensors (sensors) used in the manufacture of disposable integrated electrodes constituting a part of electrocardiographic diagnostic and monitoring instruments. Micron also acts as a distributor of metal snap fasteners (snaps), another component used in the manufacture of disposable electrodes. In 1997, Micron acquired the rights to an assembly machine, which it manufactures and sells or leases to its sensor and snap customers. Micron was incorporated in the State of Massachusetts in 1972, and is located in the same facility with ART in Fitchburg, Massachusetts. The sensors are a critical component of the signal pathway in many different types of disposable electrodes. For example, the disposable electrodes used to capture the electric impulses of the heart and enable the analysis of Late Potentials require sensors which provide for an accurate, low noise signal to be transmitted to the monitoring device.

Micron is the largest of a few companies providing silver / silver-chloride sensors to the medical device industry. Micron s customers manufacture monitoring and transmitting electrodes which are utilized in a variety of bio-feedback and bio-stimulation applications including, among many others, electrocardiograms (ECG s), electroencephalograms (EEG s), electro-muscular stimulation (EMS), and thermo-electrical neural stimulation (TENS). The Company believes that because of its history of producing high volume precision plastic products, Micron was able in 2004, to secure supply agreements to produce several other medical industry products. These high volume products provide diversification for Micron, and reduce its dependence on a single product line.

On May 7, 2004, Micron completed the purchase of substantially all of the operating assets of privately-held Shrewsbury Molders Inc., formerly known as New England Molders, Inc. (NEM) of Shrewsbury, Massachusetts. The Company completed the move of the division into its newly renovated molding facility located at the Company s Fitchburg complex in the fourth quarter of 2004. The relocation provides operational synergies and cost savings in manufacturing and administration. The NEM division is a custom molder that produces a wide variety of consumable medical products, medical device and equipment components, and other products for the consumer, electronic, and aerospace industries.

The address of our principal executive offices is 25 Sawyer Passway, Fitchburg, Massachusetts 01420, and our telephone number is (978) 345-5000. Our web site is www.arthrt.com. We have not incorporated by reference into this prospectus the information on our web site, and you should not consider it to be a part of this document. Our web site address is included in this document as an inactive textual reference only.

Products

Revenues

The following table sets forth for the periods specified, the revenue derived from the products of ART and its subsidiary Micron (collectively, the Company):

	Nine Months Ended September 30, 2005	%	Year Ended December 31, 2004	%	2003	%
Sensors	$ 7,186,277	73	$ 8,881,815	80	$ 7,227,647	94
Other Molded Products	1,845,903	19	1,841,671	17	--	--
Snaps & Snap Machines	328,684	3	387,057	3	449,555	6
Other products	510,372	5	--	--	165	--
Total	$ 9,871,236	100	$ 11,110,543	100	$ 7,677,367	100

Sensors and Snaps

Sensors

Micron is a manufacturer and distributor of silver-plated and non-silver plated conductive resin sensors for use in the manufacture of disposable electrodes for ECG diagnostic, monitoring and related instrumentation. The disposable electrode has proven to be more reliable than the reusable electrodes available in the market. Additionally, disposable electrodes are easier and less expensive to use as compared to reusable electrodes, which require cleaning after each use. The type of sensor manufactured by Micron consists of a molded plastic substrate plated with a silver / silver chloride surface, which is a highly sensitive conductor of electrical signals. Silver / silver chloride-plated disposable electrodes are utilized in coronary care units, telemetry units, and for other monitoring purposes. In addition to the traditional ECG tests, disposable electrodes incorporating Micron s sensor are used in connection with stress tests and Holter monitoring.

Micron also manufactures sensors and conductive plastic studs used in the manufacture of radiotranslucent electrodes. The radiotranslucent electrodes are virtually invisible to X-rays and are preferred in some applications such as nuclear medicine, cath labs, ICU/CCU and certain stress and Holter procedures. The radiotranslucent conductive plastic studs are manufactured with uniquely engineered resin to enable electrical conductivity between the sensor and the electrophysiological instrumentation without the use of a metal snap. Micron also manufactures the mating conductive resin snaps, which replace traditional metal snap fasteners, used in the radiotranslucent application.

Other custom designed sensors are manufactured for specific unique applications in the EEG, EMG or TENS markets. Recent growth in the volume of highly engineered EEG or electroencephalogram sensors reflects demand for noninvasive measuring of neurological impulses. Micron s strength in design and low cost manufacturing support enables our customers to grow into unique niche medical applications and electrophysiological monitoring with custom designed sensors.

Metal Snap Fasteners

Metal snap fasteners are used as an attachment and conductive connection between the disposable electrode and the lead wires of an ECG machine. Micron purchases the metal snap fasteners for resale from multiple suppliers and performs additional quality assurance tests, repackages and stocks product for its customers who may or may not purchase the snaps in addition to Micron s sensors.

Other Molded Components

In 2004, Micron began selling other precision custom molded high volume component parts. As a result of efforts to increase interest from industrial companies, in 2004 the Company added sales in these high volume molded products, which diversify our existing product lines while utilizing previously unused manufacturing capacity. The Company began shipping product and realizing sales of such high volume molded products in the fourth quarter of 2004. To defray the customer s upfront tooling costs and remain competitive with global competition, some high volume customers require the financing of a customer specific tool over several years. The cost of the tool is guaranteed by the customer and repaid over time as the molded product is shipped.

The incorporation of the NEM acquisition into the Micron molding facility increased production flexibility for both entities, and dramatically expanded the size and shape of products produced. From consumable medical products to medical equipment components, the new division will decrease the dependence on sensor production for manufacturing growth.

High Speed Electrode Assembly Machine

Manufacturers of disposable medical electrodes use the Company s attaching machines in the assembly of sensors and snaps into disposable electrodes. Manufacturing, leasing, selling, and providing replacement parts to medical sensor and snap application machines provide Micron with a complimentary product to sell to existing sensor and snap customers. As a value added service, a technician can be dispatched to troubleshoot and improve the performance of our customer s fully automated electrode assembly production lines.

Signal-Averaging Electrocardiographic (SAECG) Products

Predictor® 7

The Predictor® 7 software is a Windows® compatible version of Arrhythmia Research Technology s analytical program for the detection of Late Potentials. Predictor® 7 utilizes the unique, patented Bi-directional, Four-Pole Butterworth Filtering technique defined as the Standard by the joint AHA/ACC/ESC task force on Signal-Averaging Electrocardiography[(1)]. All clinically accepted measurement criteria are provided: total QRS duration, duration of the QRS under 40 µV, the RMS voltage of the last 40 msec of the QRS and the noise level. Graphical output of the analysis can be presented both on screen and in hard copy. Predictor® 7 also incorporates additional signal processing capabilities for clinical research. The IntraSpect module permits detection of ventricular late potentials in patients with Bundle Branch Block. P-wave signal averaging helps predict patients at risk for atrial fibrillation and flutter. A Heart Rate Variability module can be incorporated on the Predictor platform.

---

(1) *AHA/ACC/ESC Policy Statement: Standards for the Analysis of Ventricular Late Potentials Using High Resolution or Signal-Averaged Electrocardiography: A Statement by a Task Force Committee of the European Society of Cardiology, the American Heart Association and the American College of Cardiology. JACC Vol. 17, No. 5, April 1991:999-1006*

FORWARD-LOOKING STATEMENTS

In our effort to make the information in this prospectus more meaningful, this prospectus contains both historical and forward-looking statements within the meaning of Section 27A of the Securities Act, Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act), and information relating to ART that is based on management s exercise of business judgment as well as assumptions made by and information currently available to management.

Any forward looking statements made herein are based on current expectations of the Company that involves a number of risks and uncertainties and should not be considered as guarantees of future performance. These statements are made under the Safe Harbor Provisions of the Private Securities Litigation Reform Act of 1995. Forward looking statements may be identified by the use of words such as expect,

anticipate, believe, intend, plans, predict, or will . The factors that could cause actual results to differ materially include: impact of com products and pricing, product demand and market acceptance risks, the presence of competitors with greater financial resources than the Company, product development and commercialization risks, changing economic conditions in developing countries, and an inability to arrange additional debt or equity financing.

Although the Company believes that our expectations are based on reasonable assumptions, we can give no assurance that our expectations will materialize. Many factors could cause actual results to differ materially from our forward looking statements. Several of these factors include, in addition to those contained in Factors that may affect future operating results, without limitation:

our ability to finance our business;
our ability to maintain our current pricing model and/or decrease our cost of sales;
a stable interest rate market and/or a stable currency rate environment in the world, and specifically the countries we are doing business in or plan to do business in;
continued availability of supplies or materials used in manufacturing at the current prices;
adverse regulatory developments in the United States or any other country we plan to do business in;
existing entrance of competitive products in our markets;
no adverse publicity related to our products or the Company itself;
no adverse claims relating to our intellectual property;
the ability of management to execute plans and motivate personnel in the execution of those plans;
the adoption of new, or changes in, accounting principles; legal proceedings;
our ability to maintain compliance with the AMEX requirements for continued listing of our Common Stock;
the costs inherent with complying with new statutes and regulations applicable to public reporting companies, such as the Sarbanes-Oxley Act of 2002;
our ability to efficiently integrate future acquisitions, if any;
and other new lines of business that the Company may enter in the future; and
other risks referenced from time to time elsewhere in this report and in our filings with the SEC.

The Company is under no obligation and does not intend to update, revise or otherwise publicly release any revisions to these forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of any unanticipated events.

RISK FACTORS

In addition to the other information in this prospectus, the following factors should be considered in evaluating the Company and its business. The risks and uncertainties described below are not the only ones facing the Company. Additional risks and uncertainties that the Company does not presently know or currently deems immaterial may also impair the Company s business, results of operations and financial condition.

The company s operating results may fluctuate significantly as a result of a variety of factors.

Our operating results may fluctuate significantly in the future as a result of a variety of factors, many of which are outside of our control. These factors include: the level of demand for the products that we may develop; our ability to attract and retain personnel with the necessary strategic, technical and creative skills required for effective operations; the amount and timing of expenditures by customers; the amount and timing of capital expenditures and other costs relating to the expansion of our operations; government regulation and general economic conditions. As a strategic response to changes in the competitive environment, we may from time to time make certain pricing, service, technology or marketing decisions or business or technology acquisitions that could have a material adverse effect on our quarterly results. Due to all of these factors, our operating results may fall below the expectations of securities analysts, stockholders and investors in any future period.

If trade secrets are not kept confidential, the secrets may be used by others to compete against us.

Micron relies on unpatented trade secrets to protect its proprietary process. There are no assurances that others will not independently develop or acquire substantially equivalent technologies or otherwise gain access to our proprietary process. Ultimately the meaningful protection of such unpatented proprietary technology cannot be guaranteed. The Company relies on confidentiality agreements with its employees. Remedies for any breach by a party of these confidentiality agreements may not be adequate to prevent such actions. Failure to maintain trade secret protection, for any reason, could have a material adverse effect on us.

The vast majority of revenues are derived from the sale of a single product.

In fiscal years 2004 and 2003, the Company derived 80% and 94%, respectively, and 73% in the first nine months of 2005, of its income from medical electrode sensors for use in disposable electrodes. While the technology in electrode sensors has been used for many years, there is no assurance that a new patented or unpatented technology might not replace the existing market for disposable electrode sensors. Any substantial technological advance that eliminates our product will have a material adverse effect on our operating results.

The Company is subject to stringent environmental regulations.

The Company is subject to a variety of Federal, state and local requirements governing the protection of the environment. These environmental regulations include those related to the use, storage, handling, discharge and disposal of toxic or otherwise hazardous materials used in or resulting from the Company s manufacturing processes. Failure to comply with environmental law could subject the Company to substantial liability or force us to significantly change our manufacturing operations. In addition, under some of these laws and regulations, the Company could be held financially responsible for remedial measures if its properties are contaminated, even if it did not cause the contamination.

The Company may make acquisitions of companies, products or technologies that may disrupt the business and divert management s attention, adversely impacting our results of operations and financial condition.

The Company may make acquisitions of complementary companies, products or technologies from time to time. Any acquisitions will require the assimilation of the operations, products and personnel of the acquired businesses and the training and motivation of these individuals. Management may be unable to maintain and improve upon the uniform standards, controls, procedures and policies if we fail in this integration. Acquisitions may cause disruptions in operations and divert management s attention from day-to-day operations, which could impair our relationships with current employees, customers and strategic partners. We also may have to, or choose to, incur debt or issue equity securities to pay for any future acquisitions. The issuance of equity securities for an acquisition could be substantially dilutive to our stockholders holdings. In addition, our profitability may suffer because of such acquisition-related costs or amortization costs for other intangible assets. If management is unable to fully integrate acquired businesses, products, technologies or personnel with existing operations, we may not receive the intended benefits of such acquisitions. The Company is not party to any agreements, written or oral, for the acquisition of any company, product or technology.

If the Company is unable to keep up with rapid technological changes, our processes, products or services may become obsolete and unmarketable.

The medical device and medical software industries are characterized by technological change over time. Although we attempt to expand our technological capabilities in order to remain competitive, discoveries by others may make our processes or products obsolete. If we cannot compete effectively in the marketplace, our potential for profitability and financial position will suffer.

The Company could become involved in litigation over intellectual property rights.

The medical device industry has been characterized by extensive litigation regarding patents and other intellectual property rights. Litigation, which would likely result in substantial cost to us, may be necessary to enforce any patents issued or licensed to us and/or to determine the scope and validity of others proprietary rights. In particular, our competitors and other third parties hold issued patents and are assumed to hold pending patent applications, which may result in claims of infringement against us or other patent litigation. The Company also may have to participate in interference proceedings declared by the United States Patent and Trademark Office, which could result in substantial cost, to determine the priority of inventions.

A product liability suit could adversely affect our operating results.

The testing, manufacture, marketing and sale of medical devices of our customers entail the inherent risk of liability claims or product recalls. If our customers are involved in a lawsuit, it is foreseeable that the Company would also be named. Although the Company maintains product liability insurance, coverage may not be adequate. Product liability insurance is expensive, and in the future may not be available on acceptable terms, if at all. A successful product liability claim or product recall could have a material adverse effect on our business, financial condition, and ability to market product in the future.

Provisions in our charter documents could prevent or frustrate shareholders attempts to replace or remove current management.

Our Certificate of Incorporation provides for staggered terms for the members of the Board of Directors. The Certificate provides that the Board of Directors shall be divided into three classes, each such class to be as nearly as possible equal in number of directors to each other class. Each director shall serve a term of three years. At stockholders meetings only those directors comprising one of the three classes shall have completed their term and be subject to re-election or replacement.

In addition, our Certificate of Incorporation authorizes the issuance of serial blank check preferred stock with such designations, rights, and preferences as may be determined by our Board of Directors. Accordingly, the Board of Directors may, without shareholder approval, issue shares of preferred stock with dividend, liquidation, conversion, voting, or other rights that could adversely affect the voting power or other rights of the holders of our Common Stock. Blank check preferred stock could also be issued to discourage, delay, or prevent a change in our control, although we do not currently intend to issue any additional series of our preferred stock.

Classifying the Board of Directors and the issuance of blank check preferred stock are traditional anti-takeover measures installed to present obstacles to takeovers. These provisions of our Certificate of Incorporation make it difficult for a majority shareholder to gain control of the Board of Directors and of the Company because, for instance, classification of the Board would delay the time within which a majority shareholder could obtain effective control of the Board. Such provisions may be beneficial to the Company s management and its Board in a hostile tender offer and may have an adverse impact on shareholders who may want to participate in such a tender offer, or who may want to replace the Board of Directors.

Provisions in our by-laws provide for indemnification of officers and directors, which could require us to direct funds away from our business and products.

Our by-laws provide for indemnification of officers and directors. We may be required to pay judgments, fines, and expenses incurred by an officer or director, including reasonable attorneys fees, as a result of actions or proceedings in which such officers and directors are involved by reason of being or having been an officer or director. Funds paid in satisfaction of judgments, fines and expenses may be funds we need for the operation of our business and the development of our products, thereby affecting our ability to attain profitability. This could cause our stock price to drop**.**

We may be exposed to potential risks relating to our internal control over financial reporting and our ability to have those controls attested to by our independent registered public accounting firm.

As directed by Section 404 of the Sarbanes-Oxley Act of 2002 (SOX 404), the Securities and Exchange Commission adopted rules requiring public companies to include a report of management on the company s internal control over financial reporting in their annual reports, including Form 10-KSB. In addition, the independent registered public accounting firm auditing a company s financial statements must also attest to and report on management s assessment of the effectiveness of the company s internal control over financial reporting as well as the operating effectiveness of the company s internal controls. We were not subject to these requirements for the fiscal year ended December 31, 2004. We are evaluating our internal control systems in order to allow our management to report on, and our independent auditors attest to, our internal controls, as a required part of our Annual Report on Form 10-KSB beginning with our report for the fiscal year ended December 31, 2007.

While we expect to expend significant resources in developing the necessary documentation and testing procedures required by SOX 404, there is a risk that we will not comply with all of the requirements imposed thereby. At present, there is no precedent available with which to measure compliance adequacy. Accordingly, there can be no positive assurance that we will receive a positive attestation from our independent auditors. In the event we identify significant deficiencies or material weaknesses in our internal controls that we cannot remediate in a timely manner or we are unable to receive a positive attestation from our independent auditors with respect to our internal controls, investors and others may lose confidence in the reliability of our financial statements and our ability to obtain equity or debt financing could suffer.

THE OFFERING

This prospectus relates to the Shares which may be acquired by certain employees, officers, directors and consultants to the Company who may be deemed affiliates of the Company or who hold control stock issued to such persons pursuant to the terms of the 2005 Stock Award Plan. The 2005 Stock Award Plan was adopted by the Board of Directors on April 28, 2005, and subsequently approved by the Company s shareholders on May 20, 2005. No Shares have been issued as of the date hereof.

SELLING SECURITYHOLDERS

Shares may be acquired by certain employees, officers, directors and consultants to the Company who may be deemed affiliates of the Company or who hold control stock issued to such persons pursuant to the terms of the 2005 Stock Award Plan. As the names and amounts of securities to be reoffered become known, we will supplement this prospectus with such information.

Shares covered by this prospectus may be reoffered and resold from time to time by each selling securityholder through brokers or dealers on the AMEX or otherwise at prices acceptable to the selling securityholder. To the Company s knowledge, no specific brokers or dealers have been designated by any selling securityholder nor has any agreement been entered into in respect of brokerage commissions or for the exclusive sale of any securities, which may be offered pursuant to this prospectus. Alternatively, the selling securityholder may from time to time offer the Shares through underwriters, dealers or agents, which may receive compensation in the form of underwriting discounts, concessions or commissions from the selling securityholder and/or the purchasers of the Shares for whom they may act as agents. The selling securityholder and any underwriters, dealers or agents that participate in the distribution of the Shares may be deemed to be underwriters under the Securities Act of 1933 and any profit on the sale of the Shares by them and any discounts, commissions or concessions received by any such underwriters, dealers or agents might be deemed to be underwriting discounts and commissions under the Securities Act of 1933.

Under applicable rules and regulations under the Securities Exchange Act, any person engaged in a distribution of any of the shares may not simultaneously engage in market activities with respect to the Common Stock for the applicable period under Regulation M prior to the commencement of such distribution. In addition and without limiting the foregoing, the selling securityholders will be governed by the applicable provisions of the Securities Act and Securities Exchange Act, and the rules and regulations thereunder, including without limitation Rules 10b-5 and Regulation M, which provisions may limit the timing of purchases and sales of any of the shares by the selling securityholders. Furthermore, under Regulation M, persons engaged in a distribution of securities are prohibited from simultaneously engaging in market making and certain other activities with respect to such securities for a specified period of time prior to the commencement of such distributions subject to specified exceptions or exemptions. All of the foregoing may affect the marketability of our securities.

The Company will pay all of the fees and expenses incident to the registration of the Shares (other than any fees or expenses of any counsel retained by the selling securityholder and any out-of-pocket expenses incurred by the selling securityholder or any person retained by the selling securityholder in connection with the registration of the Shares) and fees and expenses of compliance with state securities or blue sky laws and commissions. The expenses payable by the Company are estimated to be approximately $5,000.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock and certain provisions of the Certificate of Incorporation, as amended, and the By-Laws is a summary and is qualified in its entirety by reference to the provisions of the Certificate of Incorporation and the By-Laws, copies of which are filed with the SEC.

Our authorized capital stock consists of 10,000,000 shares of Common Stock, $0.01 par value and 2,000,000 shares of preferred stock, par value $1.00 per share. As of December 22, 2005, there were outstanding:

2,666,194 shares of Common Stock; and

117,000 shares issuable upon exercise of options issued pursuant to our option plan.

Common Stock

We are authorized to issue 10,000,000 shares of Common Stock, $0.01 par value per share. Subject to preferences that may be applicable to any preferred stock outstanding at the time, the holders of outstanding shares of Common Stock are entitled to receive dividends out of assets legally available therefore at such times and in such amounts as the Board of Directors may from time to time determine. Each shareholder is entitled to one vote for each share of Common Stock held on all matters submitted to a vote of shareholders. Cumulative voting for the election of directors is not authorized.

The Common Stock is not entitled to preemptive rights and is not subject to conversion or redemption. Upon liquidation, dissolution or winding up of ART, the remaining assets legally available for distribution to shareholders, after payment of claims of creditors and payment of liquidation preferences, if any, on outstanding preferred stock, are distributable ratably among the holders of the Common Stock and any participating preferred stock outstanding at that time. Each outstanding share of Common Stock is legally issued, fully paid and nonassessable.

Preferred Stock

The Certificate of Incorporation authorizes us to issue 2,000,000 shares of serial blank check preferred stock, $1.00 par value per share. Blank check preferred stock allows the Board of Directors to create one or more series of preferred stock, and to designate the rights, privileges, restrictions, preferences and limitations of any given series of preferred stock. Accordingly, the Board of Directors may, without stockholder approval, issue shares of preferred stock with dividend, liquidation, conversion, voting or other rights that could adversely affect the voting power or other rights of the holders of our Common Stock. Blank check preferred stock could also be issued to discourage a change in control, although we have no present intent to issue any additional series of our preferred stock. The Board of Directors ability to issue blank check preferred stock serves as a traditional anti-takeover measure installed to present obstacles to takeovers. This provision of our Certificate of Incorporation makes it difficult for a majority shareholder to gain control of the Company and, therefore, may be beneficial to the Company s management and its Board in a hostile tender offer and may have an adverse impact on shareholders who may want to participate in such a tender offer. Also, the issuance of preferred stock with voting and conversion rights could materially and adversely affect the voting power of the holders of the Common Stock and may have the effect of delaying, deferring or preventing a change in control of the Company.

As of the date of this prospectus there are no shares of preferred stock issued and outstanding.

Transfer Agent

The transfer agent for our Common Stock is Continental Stock Transfer & Trust Co., 17 Battery Place, New York, NY 10004.

USE OF PROCEEDS

The Company will not receive any of the proceeds from the sale of the Shares. All proceeds received from the sale of Shares under the 2005 Plan will be for the account of the selling securityholders described above.

PLAN OF DISTRIBUTION

Shares covered by this prospectus may be reoffered and resold from time to time by the class of eligible selling securityholders referred to above through brokers on the AMEX or otherwise at prices acceptable to the selling securityholder. To the Company s knowledge, no specific brokers or dealers have been designated by any selling securityholder nor has any agreement been entered into in respect of brokerage commissions or for the exclusive sale of any securities, which may be offered pursuant to this prospectus. Alternatively, the selling securityholder may from time to time offer the Shares through underwriters, dealers or agents, which may receive compensation in the form of underwriting discounts, concessions or commissions from the selling securityholder and/or the purchasers of the Shares for whom they may act as agents. The selling securityholder and any underwriters, dealers or agents that participate in the distribution of the Shares may be deemed to be underwriters under the Securities Act and any profit on the sale of the Shares by them and any discounts, commissions or concessions received by any such underwriters, dealers or agents might be deemed to be underwriting discounts and commissions under the Securities Act.

Any securities covered by this prospectus that qualify for sale pursuant to Rule 144 under the Securities Act may be sold under that Rule rather than pursuant to this prospectus. There can be no assurance that the selling securityholders will sell any or all of the Shares of Common Stock offered hereunder.

LEGAL MATTERS

Certain legal matters in connection with the Shares have been passed upon for the Company by Dilworth Paxson LLP, Washington, D.C.

EXPERTS

The financial statements incorporated by reference in this prospectus have been audited by BDO Seidman, LLP, an independent registered public accounting firm, to the extent and for the periods set forth in their report, incorporated herein by reference and are incorporated herein by reference in reliance upon such report given upon the authority of said firm as experts in auditing and accounting.

NO DEALER, SALESMAN OR ANY OTHER PERSON HAS BEEN AUTHORIZED IN CONNECTION WITH THIS OFFERING TO GIVE ANYINFORMATION OR TO MAKE ANY REPRESENTATIONS OTHER THAN THOSE CONTAINED IN THIS PROSPECTUS. NOT CONSTITUTE AN OFFER OR A SOLICITATION IN ANY JURISDICTION TO ANY PERSON TO WHOM IT IS UNLAWFUL TO MAKE SUCH AN OFFER OR SOLICITATION. 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 CIRCUMSTANCES OF THE COMPANY OR THE FACTS HEREIN SET FORTH SINCE THE DATE HEREOF

TABLE OF CONTENTS

ARRHYTHMIA RESEARCH TECHNOLOGY, INC. HAS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION, WASHINGTON, D.C., A REGISTRATION STATEMENT UNDER THE SECURITIES ACT WITH RESPECT TO THE SHARES OFFERED HEREBY. THIS PROSPECTUS OMITS CERTAIN INFORMATION CONTAINED IN THE REGISTRATION STATEMENT. THE INFORMATION OMITTED MAY BE OBTAINED FROM THE SECURITIES AND EXCHANGE COMMISSION UPON PAYMENT OF THE REGULAR CHARGE THEREFOR.

Arrhythmia Research Technology, Inc.

100,000 shares of Common Stock

PROSPECTUS

December 23, 2005

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

ITEM 3. INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference information from other documents that we file with them, which means that we can disclose important information by referring to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information.

We incorporate by reference the documents listed below together with any amendments thereof:

Annual Report on Form 10-KSB for the fiscal year ended December 31, 2004, filed with the SEC on March 31, 2005;
Current Report on Form 8-K filed with the SEC on April 12, 2005;
Quarterly Report on Form 10-QSB filed with the SEC on May 16, 2005;
Quarterly Report on Form 10-QSB filed with the SEC on August 15, 2005;
Current Report on Form 8-K filed with the SEC on August 31, 2005;
Quarterly Report on Form 10-QSB filed with the SEC on November 14, 2005; and
The description of our Common Stock contained in our Registration Statement on Form 8-A, filed with the SEC on February 12, 1992, including any amendment or reports filed for the purpose of updating such description.

We also incorporate by reference additional documents that may be filed with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act prior to the sale of all of the shares covered by this registration statement.

We will provide to you, without charge, upon your written or oral request, a copy of any or all of the documents that we incorporate by reference, including exhibits. Please direct requests to: Arrhythmia Research Technology, Inc., 25 Sawyer Passway, Fitchburg, Massachusetts 01420, Attn: Corporate Secretary; (978) 345-5000.

ITEM 4. DESCRIPTION OF SECURITIES

Not applicable.

ITEM 5. INTERESTS OF NAMED EXPERTS AND COUNSEL

Not applicable.

ITEM 6. INDEMNIFICATION OF OFFICERS AND DIRECTORS

Section 145 of the General Corporation Law of the State of Delaware grants each corporation organized thereunder, such as the Company, the power to indemnify its directors and officers against liability for certain of their acts. Section 102(b)(7) of the Delaware Corporation Law permits a provision in the certificate of incorporation of each corporation organized thereunder eliminating or limiting, with specified exceptions, the personal liability of a director to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. The Company s certificate of incorporation contains this provision. The foregoing statements are subject to the detailed provisions of Sections 145 and 102(b)(7) of the Delaware General Corporation Law.

Article VI of the Company s By-Laws provides that the Company will indemnify its officers, directors and employees to the fullest extent permitted by the Delaware General Corporation Law in connection with proceedings with which any such person is involved by virtue of his or her status as an officer, director, employee or agent. The Company maintains directors and officers liability insurance, including a reimbursement policy in favor of the Company.

The By-Laws may require ART, among other things, to indemnify directors or officers against certain liabilities that may arise by reason of their status or service as directors (other than liabilities resulting from willful misconduct of a culpable nature), to advance expenses to them as they are incurred, provided that they undertake to repay the amount advanced if it is ultimately determined by a court that they are not entitled to indemnification, and to obtain and maintain directors and officers insurance if available on reasonable terms.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, ART has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

ITEM 7. EXEMPTION FROM REGISTRATION CLAIMED

Not applicable.

ITEM 8. EXHIBITS

Exhibit Number	Description
4.1	Arrhythmia Research Technology, Inc. 2005 Stock Award Plan
5.1	Opinion of Dilworth Paxson LLP
23.1	BDO Seidman, LLP Consent
23.2	Dilworth Paxson LLP Consent (included in Exhibit 5.1)
24.1	Power of Attorney is contained on the signature page of this Registration Statement.

ITEM 9. UNDERTAKINGS

a. The undersigned Registrant will:

(1) File, during any period in which it offers or sells securities, a post-effective amendment to this registration statement to include any additional or changed material information on the plan of distribution.

(2) For determining liability under the Securities Act, treat each post-effective amendment as a new registration statement of the securities offered, and the offering of the securities at that time to be the initial *bona fide* offering thereof.

(3) File a post-effective amendment to remove from registration any of the securities that remain unsold at the end of the offering.

b. The undersigned registrant hereby undertakes 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 (and, where applicable, each filing of an employee benefit plan s annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

c. Insofar as indemnification for liabilities arising under the Securities Act of 1933 (the Act) may be permitted to directors, officers and controlling persons of small business issuer pursuant to the foregoing provisions, or otherwise, the small business issuer 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.

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-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Fitchburg, Massachusetts, on the 22 day of December, 2005.

ARRHYTHMIA RESEARCH TECHNOLOGY, INC.

By: /s/ David A. Garrison

David A. Garrison
Chief Financial Officer

POWER OF ATTORNEY

Each of the undersigned officers and directors of the Registrant, Arrhythmia Research Technology, Inc., whose signature appears below, hereby appoints David A. Garrison and James E. Rouse, jointly and individually, as attorneys-in-fact for the undersigned with full power of substitution, to execute in his or her name and on behalf of such person, individually, and in each capacity stated below, this Registration Statement on Form S-8 and one or more amendments (including post-effective amendments) to this Registration Statement and any related registration statement under Rule 462(b) under the Securities Act of 1933 as the attorney-in-fact shall deem appropriate, and to file any such amendment (including exhibits thereto and other documents in connection herewith) to this Registration Statement on Form S-8 or Rule 462(b) registration statement with the Securities and Exchange Commission, granting unto said attorneys-in-fact, 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 such person might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact, or either of them, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ James E. Rouse James E. Rouse	President, Chief Executive Officer and Director (principal executive officer)	December 22, 2005
/s/ E. P. Marinos E. P. Marinos	Chairman of the Board and Director	December 22, 2005
/s/ Julius Tabin Julius Tabin	Director	December 22, 2005
/s/ Paul F. Walter Paul F. Walter	Director	December 22, 2005
/s/ David A. Garrison David A. Garrison	Executive Vice President and Chief Financial Officer (principal financial officer)	December 22, 2005

EXHIBIT INDEX

Exhibit Number	Description
4.1	Arrhythmia Research Technology, Inc. 2005 Stock Award Plan