



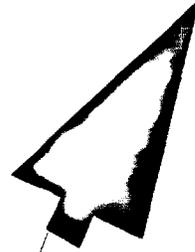
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# Reaching New Heights In Resuscitation

DEC 24 2003

## 2003 ANNUAL REPORT



ZOLL MEDICAL CORP  
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THOMSON  
FINANCIAL

# ZOLL

# Dear Shareholders

ZOLL's performance during fiscal 2003 was outstanding. For the fifth consecutive year, we posted an increase in overall sales of 22.9% (to \$184.6 million). Earnings grew to record levels (to \$12.9 million or \$1.40 per diluted share). We ended the year with no debt and \$60.8 million in cash and short-term investments. Our performance remained strong despite lower customer spending in the Hospital and Public Safety markets. Additionally, we completed a number of transactions that will strengthen our product portfolio and allow ZOLL to take advantage of new opportunities in resuscitation.

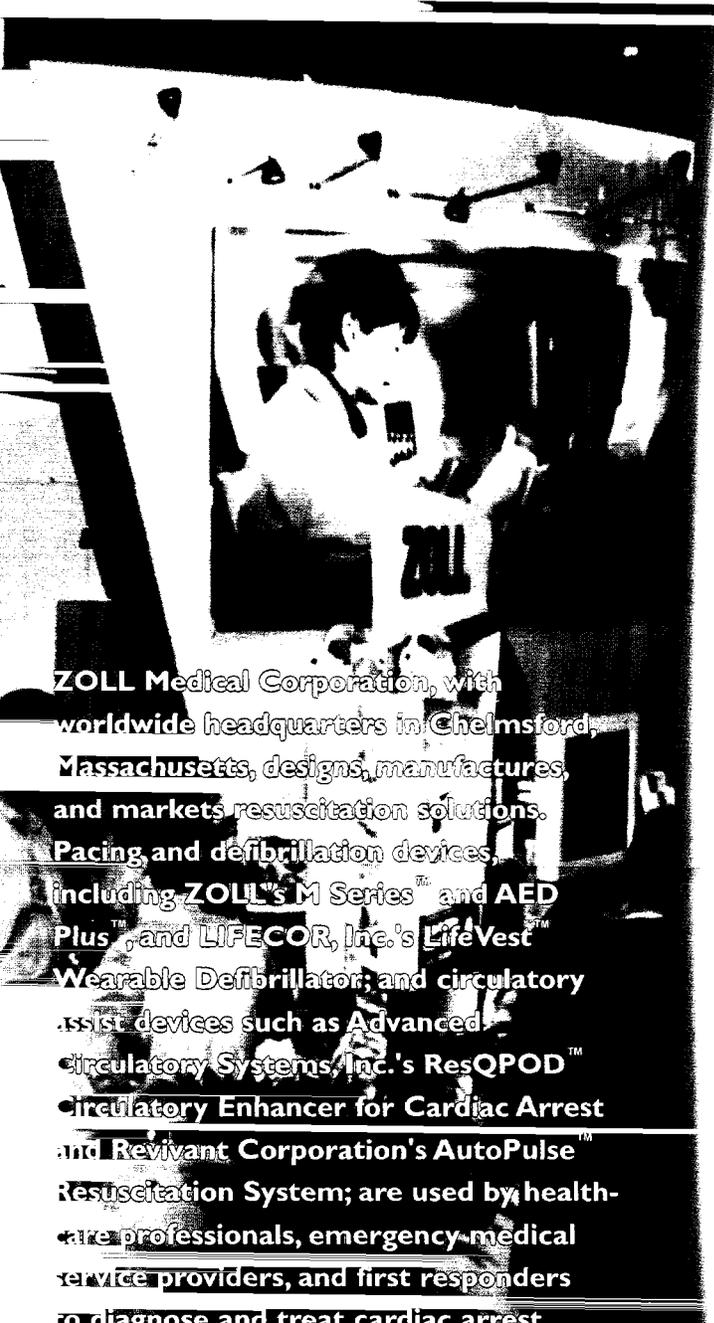
The strong year included two accomplishments with which we are particularly pleased. In November 2002, the U.S. military awarded an \$8.9 million sole-source contract—the single largest order in ZOLL's history—choosing the M Series CCT as the standard for its transport defibrillators. We received additional follow-on orders throughout the year. This contract clearly highlights ZOLL's leadership in defibrillation.

The second accomplishment was the sales performance of our new AED Plus, which reached \$18.8 million across U.S. and International markets. This level represents approximately 10% of the rapidly growing worldwide AED market. As the only automated external defibrillator on the market that gives rescuers instantaneous CPR feedback, the AED Plus stands out from the competition and will continue to gain acceptance.

## GROWTH IN ALL MARKET SEGMENTS

Sales in the International segment were exceptional, increasing 38.8% (to \$46.1 million). These results reflect our continued investments in direct operations, which gained traction in the United Kingdom, the Netherlands, Germany, France, Canada, and Australia. We continue to invest in sales personnel to manage our distribution network, with employees in China, India, and Russia being our newest additions.

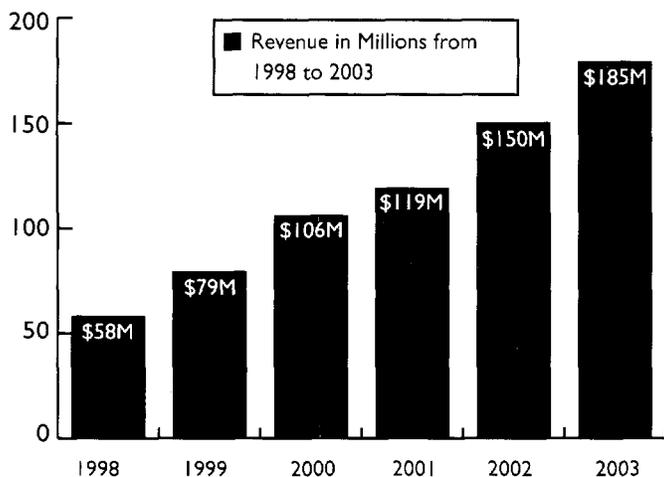
Sales in the U.S. Hospital market increased 25.4% (to \$63.6 million). Despite a slowdown in hospital spending, ZOLL's presence has remained strong thanks to our superior technology and diverse product line. From the most basic AED Plus for early defibrillation programs, to the sophisticated M Series CCT for critical care transport, ZOLL's products address key market needs, allowing us to remain the choice of leading medical centers nationwide.



ZOLL Medical Corporation, with worldwide headquarters in Chelmsford, Massachusetts, designs, manufactures, and markets resuscitation solutions. Pacing and defibrillation devices, including ZOLL's M Series™ and AED Plus™, and LIFE COR, Inc.'s LifeVest™ Wearable Defibrillator; and circulatory assist devices such as Advanced Circulatory Systems, Inc.'s ResQPOD™ Circulatory Enhancer for Cardiac Arrest and Revivant Corporation's AutoPulse™ Resuscitation System; are used by health-care professionals, emergency-medical service providers, and first responders to diagnose and treat cardiac arrest wherever it may occur. ZOLL also designs and markets software that automates the collection and management of both clinical and non-clinical data. ZOLL has operations in the United States, Canada, the United Kingdom, Germany, France, the Netherlands, Australia, and business partners in all of the world's major markets.

# Customers and Employees:

In the U.S. Public Safety market (EMS, Fire, and Police) sales reached record levels of \$47.0 million, increasing 5.4%, despite continued budgetary woes at the state and local levels that constrained spending. ZOLL was successful due to strong inroads made with the AED Plus™ and accelerating acceptance of RescueNet™—the only integrated EMS information management system on the market today. EMS personnel use this system to automate data captured in the field, allowing them to improve overall resuscitation efforts.



## MILESTONES IN RESUSCITATION LEADERSHIP

As we highlighted last year, our vision for the future of ZOLL includes broadening our product portfolio beyond traditional defibrillation and pacing equipment. We see the opportunity to fill more niches within defibrillation, as well as to move “beyond the shock” into other types of products that help improve survival rates. Our first step in fiscal 2002 was to focus on improving CPR with our AED Plus product. In fiscal 2003, we announced three new initiatives to further realize our vision.

- In November 2002, ZOLL and LIFECOR, Inc. agreed to sell the LifeVest™ Resuscitation System to hospitals in North America. LifeVest is the only FDA-approved automated defibrillator to be worn outside the body rather than implanted in the chest. It has the unique ability to provide automatic and virtually immediate defibrillation after detecting a life-threatening arrhythmia. This product fills the need for temporary high-level protection of specific patients within a hospital.

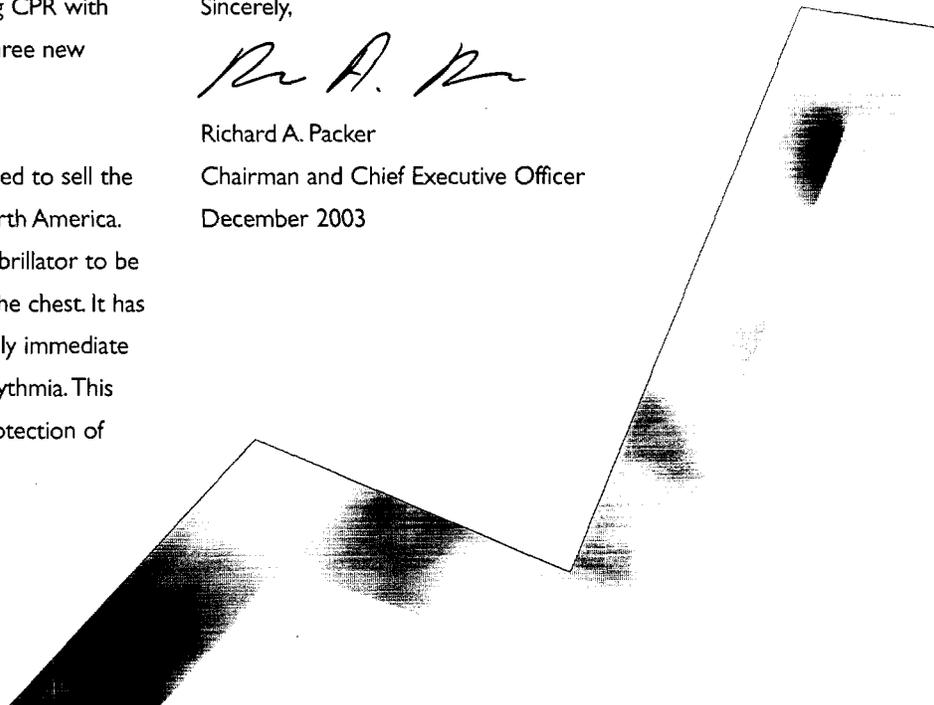
- In January 2003, ZOLL and Advanced Circulatory Systems, Inc. (formerly ResQSystems, Inc.) agreed to bring the ResQPOD™ Circulatory Enhancer for Cardiac Arrest to market. In clinical trials, ResQPOD circulated up to two times as much blood to vital organs when compared to CPR without the ResQPOD. This simple, disposable device integrates easily into a rescuer's standard resuscitation routine.
- In August 2003, ZOLL announced an agreement with Revivant Corporation to help commercialize the AutoPulse™, which automates chest compressions for more effective CPR. In clinical trials, the FDA-approved AutoPulse has been shown to significantly increase blood flow to the brain and heart in cardiac arrest victims. AutoPulse has the potential to set ZOLL apart from the competition by redefining how resuscitation is accomplished. The agreement with Revivant anticipates ZOLL's acquisition of this revolutionary technology by October 2004.

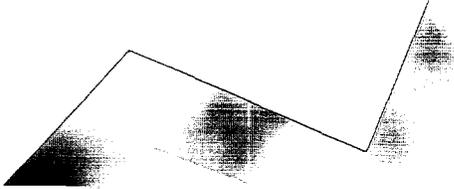
## FISCAL 2004: REDEFINING RESUSCITATION

In fiscal year 2004, ZOLL will expand our presence in all markets and continue to broaden our product offering beyond defibrillation. We will invest heavily in expanding our distribution networks and advancing resuscitation technology. These efforts will serve us well as we work to deliver tools that help increase survival and allow us to continue our strong growth. We want to thank our investors, customers, and employees who believe in our approach to improving resuscitation. We appreciate your support.

Sincerely,

Richard A. Packer  
Chairman and Chief Executive Officer  
December 2003





ZOLL has accomplished much in the resuscitation market. We offer unique products that help save lives both inside and outside the hospital. Yet with only 5% to 7% of victims surviving sudden cardiac arrest, there is a great opportunity to set the bar higher and deliver the next industry standard. We continually ask ourselves, "Are we doing enough? What more can we do?" We see tremendous opportunity to excel in three areas:

- 1) *Early defibrillation: More must be done to get automated external defibrillators (AEDs) into the hands of many people in countless places.*
- 2) *Improved circulation: While defibrillation is important, it only helps treat half of the victims. Rescuers need better equipment to improve blood flow and circulation.*
- 3) *Better information tools: Healthcare professionals need automated and electronic tools—in the field and in the hospital—to practice better medicine.*

The following pages demonstrate ZOLL's vision of advancing technology to enhance resuscitation efforts and ultimately improve survival rates. We are making this vision a reality.

**ARE THERE ENOUGH AEDs AVAILABLE TODAY? NO.**

There are over 460,000 deaths each year from out-of-hospital cardiac arrest in the U.S. Estimates say that more than half of these deaths occur suddenly. If survival rates increase from 5% to 20%, more than 40,000 lives could be saved just in the U.S. alone.

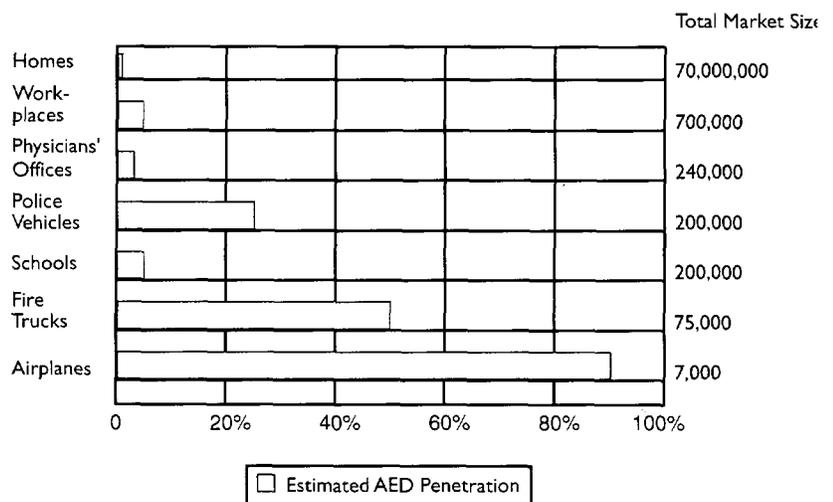
Using AEDs can save more lives. While the benefits of AEDs enjoy an increasing level of public awareness, their availability remains low. They must be readily accessible in public areas where they can make a real difference in life-and-death emergencies.

ZOLL has created a unique AED that is simple to use and tells the rescuer exactly what to do. Our philosophy is if AEDs are simple to use, more people will confidently use them.

*"AEDs must do more than just shock cardiac arrest victims. Nearly half of these victims need better circulation more than they need defibrillation—and they need it fast."*

**Max Harry Weil, M.D., Ph.D.**  
**President and Distinguished Professor**  
**The Institute of Critical Care Medicine**

Very Few Places Have AEDs on Hand

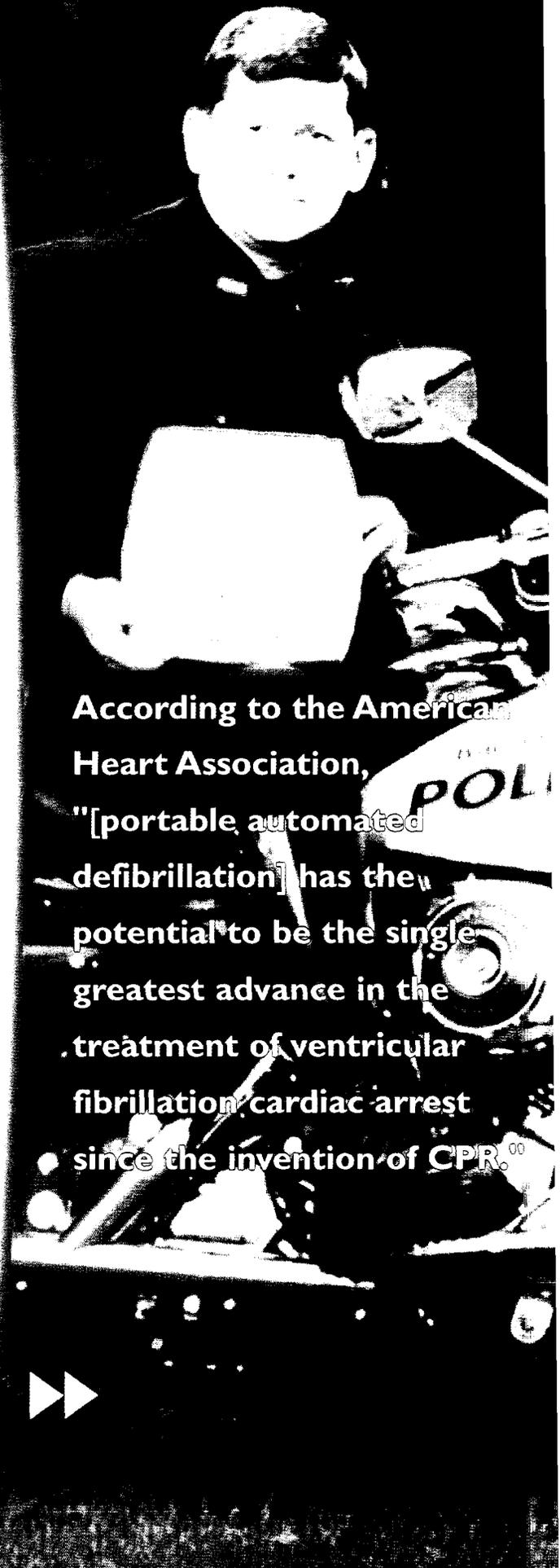
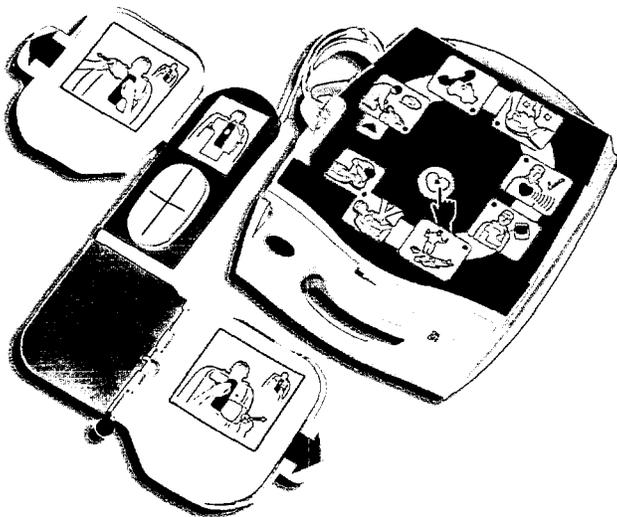


**THE AED PLUS™ WITH CPR FEEDBACK:  
ONLY DEVICE TO ADDRESS ENTIRE "CHAIN  
OF SURVIVAL"**

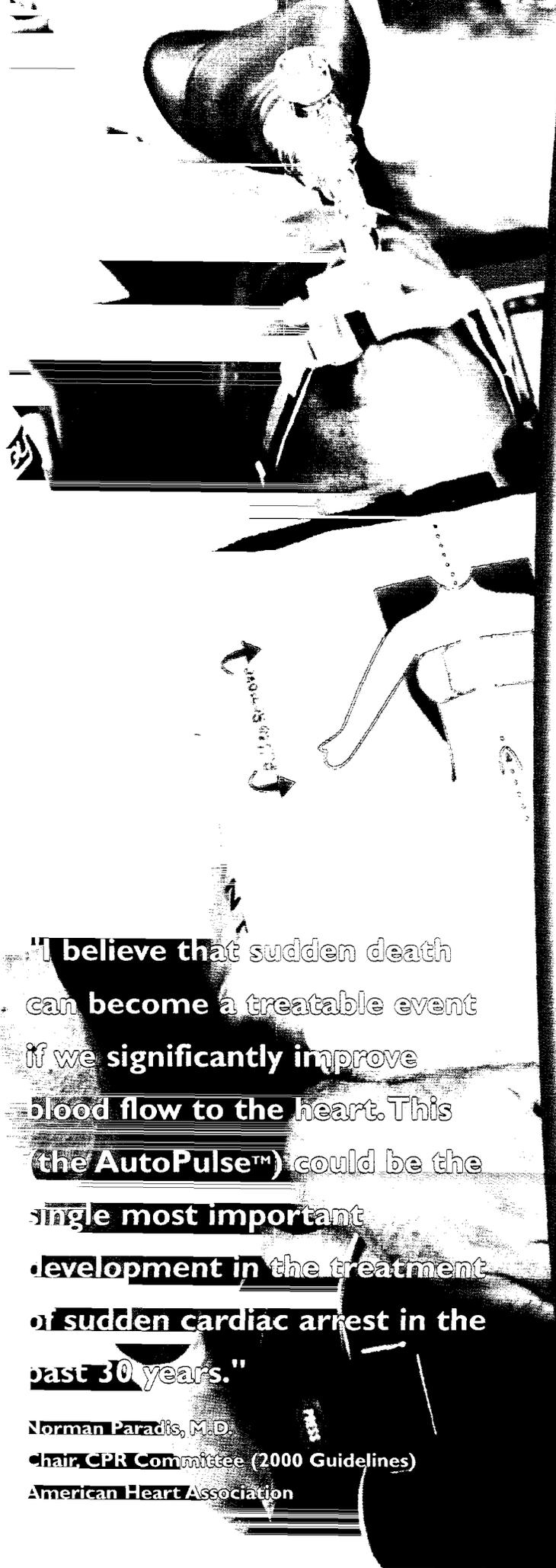
Making AEDs more accessible is an important first step in helping save more lives. Since 50% of collapsed victims need CPR rather than defibrillation, an AED that assists with CPR efforts would make rescuers more effective.

ZOLL's AED Plus with instantaneous CPR Feedback, designed specifically for non-medical professionals, is the only public access defibrillator available today that coaches rescuers through all steps of the American Heart Association's Chain of Survival. It provides vital visual and audio cues to ensure effective defibrillation and CPR. Proprietary technology evaluates the rescuer's CPR technique to help achieve the recommended depth and rate of chest compressions. Better CPR technique means a better chance of saving a life.

Better access is an important first step to help save more lives. But further work must be done to address the entire resuscitation process.



**According to the American Heart Association, "[portable, automated defibrillation] has the potential to be the single greatest advance in the treatment of ventricular fibrillation cardiac arrest since the invention of CPR."**



There are limitations to what defibrillation alone can achieve. There are also limitations to conventional CPR, which only delivers 25% of normal blood flow to the brain and 15% of normal blood flow to the heart.

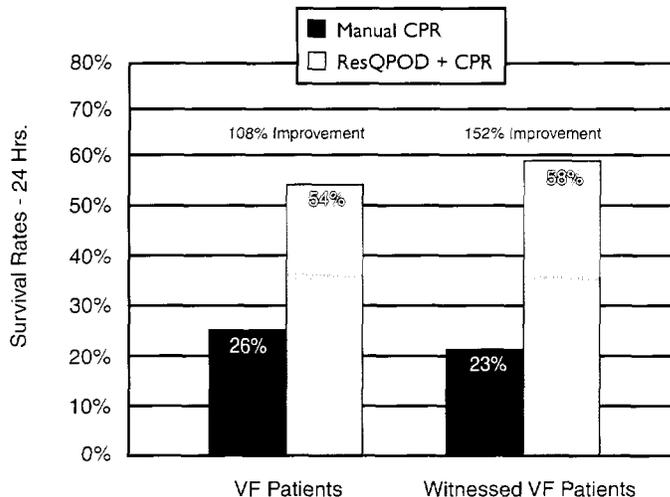
Sufficient blood flow and oxygen levels during CPR are vital to preserving brain and cardiac function. Yet in the last 30 years, there has been little technological advancement to improve CPR. While the ZOLL AED Plus™ with instantaneous CPR Feedback is a first step, additional technology is needed.

#### THE RESQPOD™ CIRCULATORY ENHANCER

The ResQPOD Circulatory Enhancer for Cardiac Arrest increases blood flow to the body's vital organs by creating a vacuum within the victim's chest during the decompression phase of CPR. Its patented approach enhances manual CPR efficiency by utilizing the interdependence of the body's respiratory and circulatory systems. The ResQPOD can circulate up to two times as much blood to the heart and brain when compared to CPR without the ResQPOD.

The ResQPOD, being distributed by ZOLL for Advanced Circulatory Systems, Inc., is CE approved for sale in Canada and Europe. ZOLL will expand distribution to the United States upon receipt of 510k clearance from the FDA.

#### The ResQPOD Improves Short-term Survival Rates



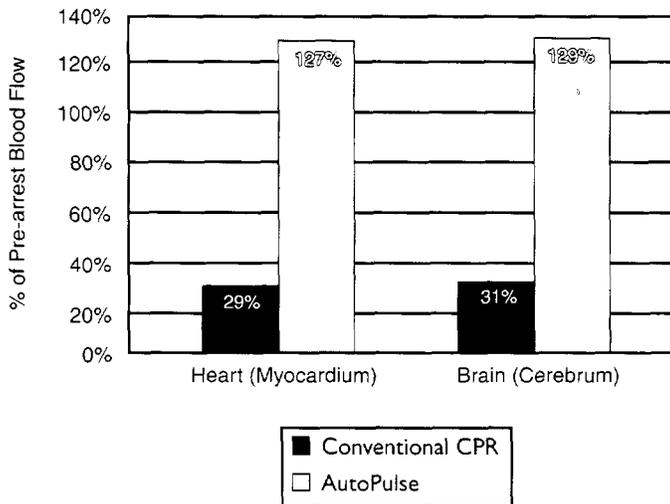
"I believe that sudden death can become a treatable event if we significantly improve blood flow to the heart. This (the AutoPulse™) could be the single most important development in the treatment of sudden cardiac arrest in the past 30 years."

Norman Paradis, M.D.  
Chair, CPR Committee (2000 Guidelines)  
American Heart Association

**AUTOPULSE™: A BREAKTHROUGH  
IN RESUSCITATION**

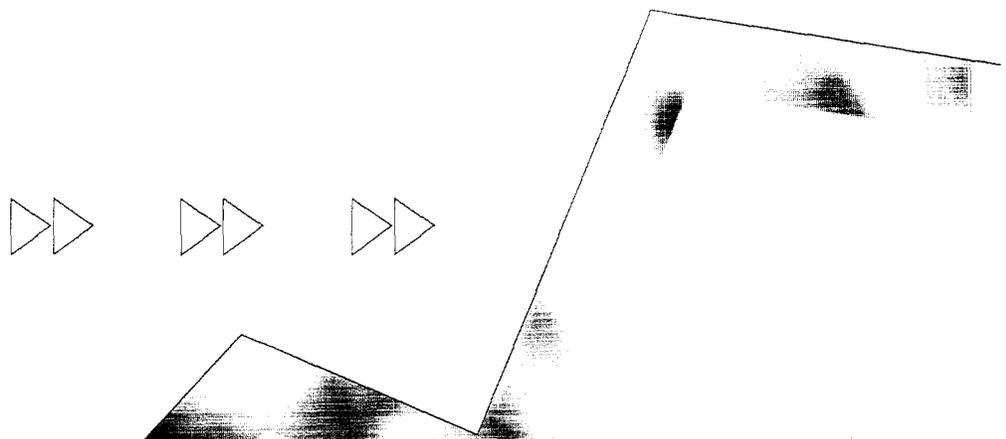
The AutoPulse, manufactured by ZOLL's strategic partner Revivant Corporation, can actually attain pre-arrest blood flow levels through non-invasive cardiac assistance. The device consists of a battery-operated electromechanical platform and a load-distributing band that fastens across the victim's chest. The system completes automated and consistent chest compressions by retracting the band into the platform at 80 times per minute. This portable system relieves rescuers of the arduous task of performing proper and continuous chest compressions, freeing them to focus on other interventions that save lives.

**In Animals, the AutoPulse Provided Blood Flow that was Significantly Greater than Pre-arrest Levels**



*"Studies show not everyone needs a shock—they need better CPR. Improving blood flow and providing oxygen to vital organs is critical to preservation and improved resuscitation success."*

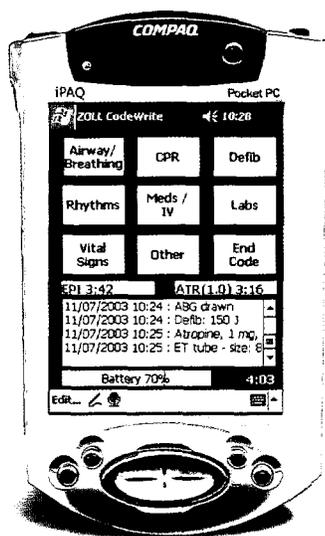
**Henry R. Halperin, M.D., M.A.P., F.A.H.A.  
Cardiologist, Professor of Medicine, Radiology,  
and Biomedical Engineering  
Johns Hopkins University**



To further improve the resuscitation process, there is a need for better methods to gather and manage information collected by medical devices. Tools that easily automate data capture and meaningfully improve data management can enhance decision-making for issues such as quality of care, operational efficiency, and performance. These tools must seamlessly integrate into existing clinical practices to be accepted quickly by clinicians and EMS personnel alike.

*"Automating resuscitation data during a cardiac arrest event ensures accurate and complete code event information and achieves a new level of efficiency in data entry and management."*

**Judy Boehm, MSN, RN**  
**CPR Program Clinical Nurse Specialist**  
**Dartmouth-Hitchcock Medical Center**



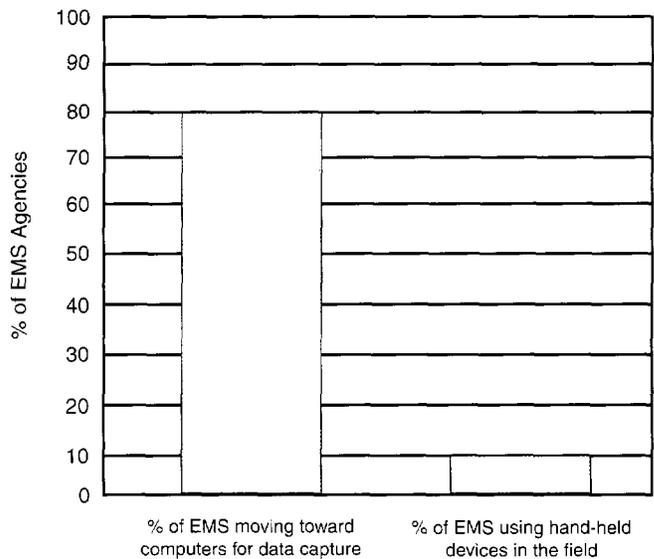
## LEADERSHIP IN RESUSCITATION DATA INTEGRATION

ZOLL's vision of integrating data into resuscitation efforts was realized through RescueNet™, the first information management system for EMS that incorporates the entire out-of-hospital event—from call dispatch and patient care to billing, reporting, and business analysis.

## POCKETPCR™ FOR EMS

EMS personnel can electronically capture patient data in the field with PocketPCR. PocketPCR helps centralize and streamline information so it can be used in a more effective way to tie together the entire out-of-hospital event—from call dispatch to patient care to billing. Information can be downloaded and centralized so it can be accessed when and where it is needed.

## EMS Data Capture Goes Digital

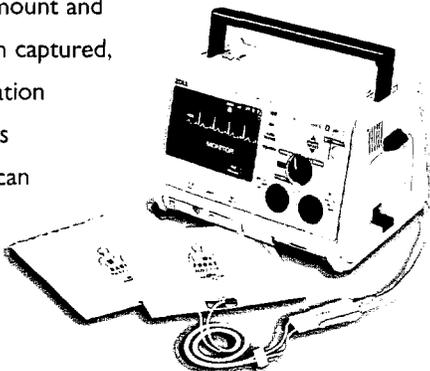


## FROM PAPER TO PDA: ZOLL CODEWRITE™

ZOLL is taking our vision of EMS data integration and bringing it to hospitals through CodeWrite, which is the first product that helps manage resuscitation information within the clinical setting.

During a cardiac arrest event, clinicians must simultaneously treat a patient while recording critical information on the event itself—a complex task that can result in data omission and inaccuracy. CodeWrite™ is a Pocket PC-based system that simplifies the recording and time-stamping of code events. For the first time, code event data and data from ZOLL defibrillators can now be integrated.

This improves the amount and quality of information captured, which helps resuscitation efforts. These records compiled over time can help clinicians see trends and determine areas for improvement.

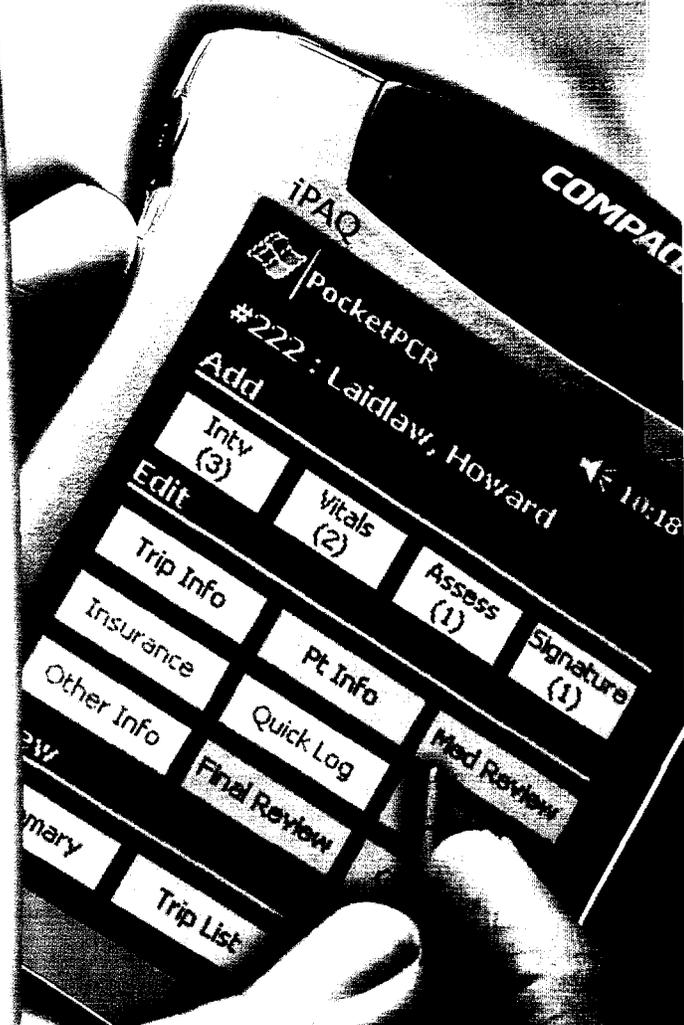


#### REDEFINING RESUSCITATION THROUGH BETTER TECHNOLOGY

*In the fight against sudden cardiac arrest, ZOLL believes there is a tremendous opportunity to save more lives through better technology. We demonstrated this belief through our commitment to improving early defibrillation and making AEDs readily available to the public.*

*However, it will take more than "shocking" victims to increase survival rates. We must improve circulation efforts while adding other needed medical interventions. We must provide information tools that help healthcare professionals decide what is working and what can be improved.*

*ZOLL envisions a day in the not-too-distant future when multiple offerings from ZOLL can be brought to bear by healthcare professionals and first-time rescuers to dramatically improve resuscitation rates.*



**"This technology is the way of the future, and the future is today."**

**Allen Johnson, MPA**  
EMS Director  
Montgomery County Hospital District





## EXECUTIVE OFFICERS AND DIRECTORS

Richard A. Packer  
Chairman of the Board & Chief Executive Officer

A. Ernest Whiton  
Vice President of Administration &  
Chief Financial Officer

Ward M. Hamilton  
Vice President, Marketing

Donald R. Boucher  
Vice President, Research & Development

E. J. Jones  
Vice President, International Sales

Steven K. Flora  
Vice President, North American Sales

Edward T. Dunn  
Vice President, Operations

John P. Bergeron  
Vice President & Corporate Treasurer

Vane P. Clayton  
President, Pinpoint Technologies, Inc.

Willard M. Bright  
Director & Chairman Emeritus

Thomas M. Clafin\*  
Director

M. Stephen Heilman, M.D.\*  
Director

Daniel M. Mulvena\*\*  
Director

James W. Biondi, M.D.\*\*  
Director

Benson F. Smith\*  
Director

Robert J. Halliday\*  
Director

\* Member of the Audit Committee  
\*\* Member of the Compensation Committee

## 2003 YEAR IN REVIEW: EXCEPTIONAL PERFORMANCE

- For the fifth consecutive year, ZOLL posted an increase in sales, which grew by 22.9% and exceeded \$184 million
- ZOLL's earnings achieved record levels of \$12.9 million (\$1.40 per diluted share)
- ZOLL ended the fiscal year with no debt and \$60.8 million in cash and short-term investments

Sales in the International segment were exceptional, increasing 38.8% to \$46.1 million

- In the Public Safety market (EMS, Fire, and Police) sales reached record levels of \$47.0 million, despite constrained market spending
- ZOLL announced new initiatives to further realize our vision of delivering technology that advances resuscitation efforts, ultimately improving survival rates

UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

Form 10-K

(Mark One)

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

For the fiscal year ended September 28, 2003

or

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

For the transition period from to

Commission file number 0-20225

**ZOLL Medical Corporation**

(Exact name of registrant as specified in its charter)

Massachusetts

(State or other jurisdiction of incorporation or organization)

04-2711626

(I.R.S. Employer Identification No.)

269 Mill Road, Chelmsford, Massachusetts

(Address of principal executive offices)

01824

(Zip Code)

Registrant's telephone number, including area code (978) 421-9655

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of Each Class</u>	<u>Name of Each Exchange on Which Registered</u>
None	None

Securities registered pursuant to Section 12(g) of the Act:

Common Stock, \$.02 Par Value  
Common Stock Purchase Rights  
(Title of class)

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

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

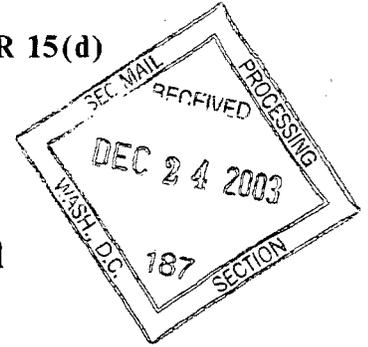
Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes  No

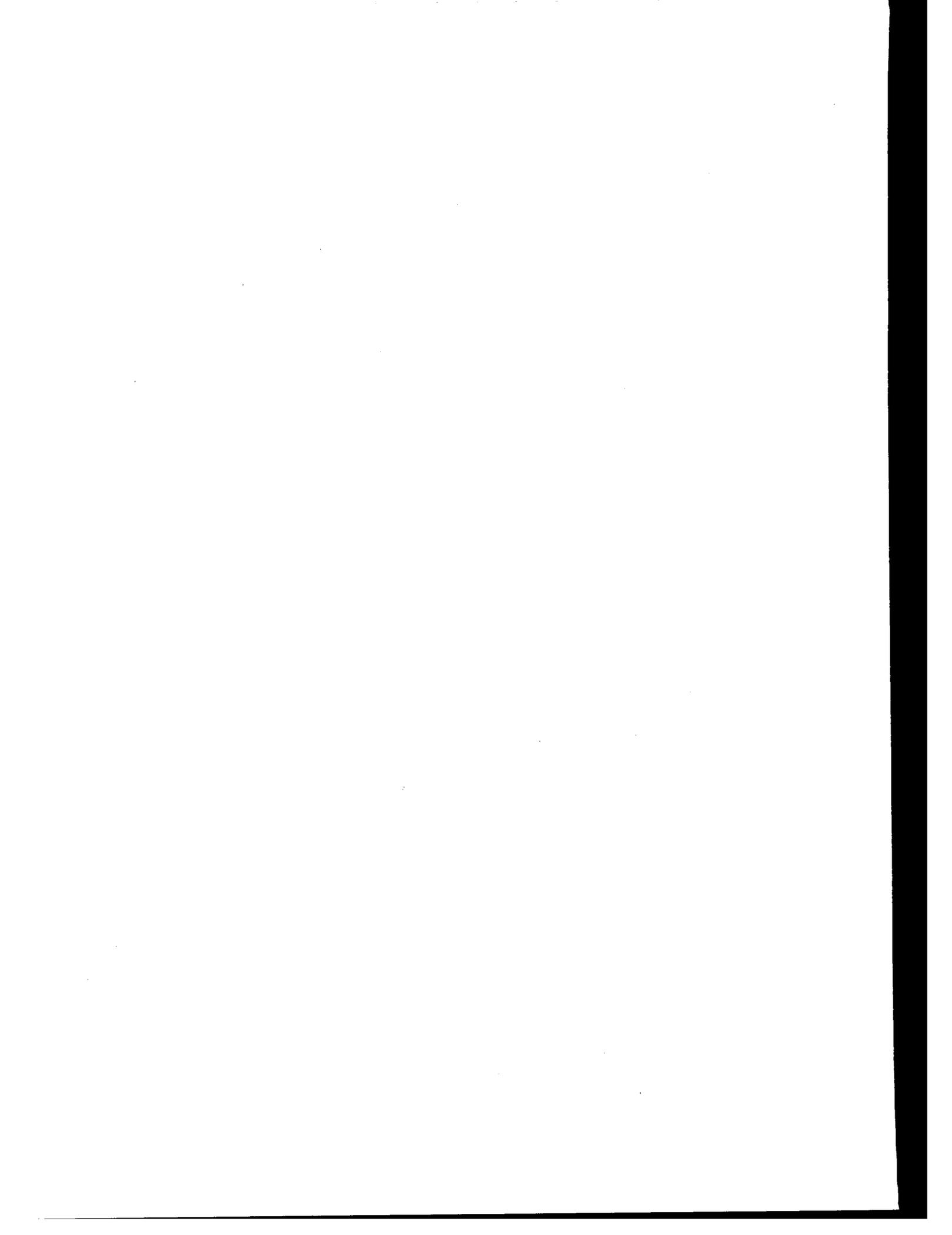
The aggregate market value of the voting stock held by non-affiliates of the registrant as of March 30, 2003 was \$317,444,140 based on a closing sales price of \$41.00 per share as reported for the NASDAQ-composite transactions.

The number of shares of the registrant's classes of common stock outstanding, as of December 9, 2003 was 9,136,595.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive Proxy statement dated on or about December 19, 2003 to be delivered to shareholders in connection with the Annual Meeting of Shareholders to be held February 11, 2004 are incorporated by reference into Part III.





## PART I

### Item 1. *Business*

#### Overview

We design, manufacture and market an integrated line of proprietary, non-invasive cardiac resuscitation devices, including external defibrillators/pacemakers, as well as disposable electrodes and emergency medical system software data management solutions. Our cardiac resuscitation products are designed to improve survival rates from sudden cardiac arrest, which is a leading cause of death in the United States. There are over 460,000 deaths each year from out-of-hospital cardiac arrest in the United States. Estimates say that more than half of these deaths occur suddenly. For victims of sudden cardiac arrest, time is the most critical element for survival. According to the American Heart Association (“AHA”), more than 95% of victims of sudden cardiac arrest die, in many cases because life-saving defibrillators arrive on the scene too late, if at all. Additionally, our products aid those collapsed victims who might benefit from cardiopulmonary resuscitation (“CPR”) or improved circulation.

The importance of immediate treatment creates an annual worldwide market for external defibrillator products, which we estimate to have been approximately \$854 million in 2003. We divide this market into three principal areas: the hospital, pre-hospital and public access defibrillation markets. The hospital market consists of doctors, nurses and other medical personnel who use defibrillators in hospital settings. The pre-hospital market consists of care providers such as paramedics, ambulance operators, emergency medical technicians, medically-trained firefighters, emergency medical personnel, and police. The public access market includes non-traditional providers such as security guards, factory staffs, and other non-medically trained personnel.

We believe that ZOLL’s market share in some of the key markets is approximately 35% in North American hospitals, 30% in North American emergency medical services (“EMS”), and 13% in the international portion of the market. We also believe we have an approximate 9% market share of the automated external defibrillator (“AED”) market.

Our main line of defibrillators is the M Series™. M Series defibrillators are smaller and lighter than competitive products, making them easier to use, carry and transport. In fiscal 2000, we began shipping M Series defibrillators equipped with our proprietary biphasic waveform which provides improved defibrillation efficacy as compared to conventional monophasic waveforms. We have received clearance from the U.S. Food and Drug Administration (“FDA”), to label our M Series defibrillators equipped with our biphasic waveform as being clinically superior to defibrillators with a monophasic waveform for particular uses. We are the only company to have received a claim of superiority on its biphasic waveform. We believe the clinical superiority of our biphasic waveform combined with product advantages including small size, light weight, and relative ease-of-use offer compelling reasons for customers to choose our products.

In addition, we see a large opportunity to improve resuscitation technology and outcomes by moving beyond electrical defibrillation and pacing to include circulatory support. Our AED Plus™ with instantaneous CPR feedback is an important element to address this opportunity. In March 2002, we introduced the AED Plus with instantaneous CPR feedback, a simplified, lower cost AED, designed for the infrequent user, and developed to assist the user in defibrillation and CPR. The device incorporates a number of unique and proprietary elements designed to provide more comprehensive support for infrequent rescuers. The device includes a highly simplified graphical user interface, one-piece electrode pads, easily obtained consumer batteries for operation, and instantaneous feedback to rescuers on CPR performance.

We believe feedback for infrequent users performing CPR is an important addition to an AED in the context that a shock is required initially for only about one-half of victims of sudden collapse. When defibrillation is not required initially, if survival is to be improved, the critical rescuer action is to provide CPR support. CPR is often associated with a return of a “shockable” ventricular rhythm, making defibrillation possible later in the event. Rescuers usually do not know whether defibrillation is the

immediate and appropriate therapy or whether CPR is required until after the AED is attached and the victim's electrocardiogram ("ECG") is analyzed. Rescuers therefore must be capable of both using the AED and providing temporary circulatory support with CPR.

## **Our Business Strategy**

The cardiac resuscitation market is a large and growing market driven by a demonstrated and increasing clinical need. Our business strategy is to continue to gain an increased share in both the domestic and international markets by offering superior products and through strengthening our distribution. While we plan to increase our share in markets that we currently serve, we also seek future growth by entering into new markets with significant opportunities. We believe that the following elements of our strategy may provide current and longer-term growth to our business.

- *Continue to Expand Successful Sales of M Series Defibrillators.* A major element of our business strategy is to capitalize on the success of the M Series defibrillators in order to increase our market share in the hospital and pre-hospital markets. To date, the M Series is our best selling defibrillator. We plan to increase our profits in this segment by expanding our presence in both the domestic and international markets by:
  - hiring additional salespeople;
  - moving from selling through a distributor to selling direct in international markets of a significant size and where market share is low; and
  - increasing distributor sales in emerging markets.

We also plan to increase profits by selling additional monitoring and display capabilities on the M Series CCT (Critical Care Transport). In combination with its small size and weight, the new feature set will make it a likely substitute for a "transport monitor" because the defibrillator and monitor are integrated into one portable unit.

- *Compete in Public Safety and the Public Access Defibrillation Markets with a Well-Differentiated Device.* We have brought to market the AED Plus, a device for the large and relatively untapped public access defibrillation market. Our device is relatively low-cost and easy to operate. We believe we can leverage our experience selling to EMS personnel in our efforts to sell our device to first responders such as police and firemen. We also market our device to other non-traditional providers of healthcare and have agreements with more than 200 independent distributors and manufacturers' representatives selling our device. In June 2002, we signed an exclusive multi-year distribution agreement with GE Medical Systems Information Technologies for the sale of our AED Plus to physicians' offices and clinics throughout the U.S. This partnership affords us an excellent opportunity to expand into a relatively un-penetrated market.
- *Seek Additional Growth Opportunities in the EMS Data Management Market.* We believe that the market for EMS data management solutions is significant and relatively un-penetrated. We are currently selling several products to this market. We have delivered an integrated dispatch, clinical information, data collection, data transfer, billing and quality assurance software solution for sale to the EMS market. We intend to leverage our existing relationships with purchasing decision-makers in this market to sell our data management solutions. We intend to expand the sale of our products into the public safety area. We believe our software solution will be differentiated by our ability to offer a complete data management solution that incorporates the clinical information collected by our defibrillators.
- *Seek Additional Opportunities in the Area of Resuscitation.* We believe there are additional untapped opportunities in the area of resuscitation outside of our core business. We plan to broaden our product offering beyond the "shock" in the future. This may include investing in the securities of other companies and participating in joint venture agreements. Additionally, we have made investments in LifeCOR, Inc., manufacturer of the LifeVest™ Wearable Defibrillator, Revivant

Corporation, manufacturer of the AutoPulse™ Resuscitation System, and Advanced Circulatory Systems, Inc, manufacturer of the ResQPOD™ Circulatory Enhancer for Cardiac Arrest. With our extensive and experienced sales organization, these products have the potential to expand our sales in our current markets.

## **Overview of Sudden Cardiac Arrest and Resuscitation Therapies**

Sudden cardiac death results from the unresuscitated, sudden, abrupt loss or disruption of heart function. This loss of heart function, also known as sudden cardiac arrest, is caused by the heart beating too rapidly and/or chaotically, ventricular fibrillation, or cardiac standstill from other non-fibrillation dysrhythmias such as pulseless electrical activity. The Center for Disease Control estimates deaths from sudden cardiac arrest at more than 460,000 per year, making it a leading cause of death in the United States. According to the AHA, early defibrillation of ventricular fibrillation is the single most critical factor in rescuing a victim of sudden cardiac arrest. Each minute of delay in returning the heart to its normal pattern of beating decreases the chance of survival by 7% to 10%.

*The Human Heart.* The normal human heart has four chambers and expands and contracts over 100,000 times each day. The two smaller, upper chambers are the atria and the two larger, lower chambers are the ventricles. The walls of the atria and the ventricles are made up of cardiac muscle which contracts rhythmically when stimulated by an electrical current. Normally, the heartbeat starts in the right atrium when a specialized group of cells sends an electrical signal. This signal spreads through the atria and then moves to the ventricles. As a result, the atria contract a fraction of a second before the ventricles. This exact pattern must be followed to ensure that the heart beats properly. This contraction and relaxation of the four chambers pumps blood to the lungs and the rest of the body. Arrhythmias are abnormal rhythms of the heart caused by insufficient circulation of oxygenated blood, drugs, electrical shock, mechanical injury, disease or other causes. The three types of arrhythmias that defibrillators and pacemakers treat are ventricular fibrillation, atrial fibrillation and bradycardia. It is possible for a patient to experience more than one type of arrhythmia during a sudden cardiac arrest. In these situations, it is important to have resuscitation equipment that has both defibrillation and pacing capabilities. If defibrillation or pacing is not indicated in a patient the appropriate therapy is CPR.

*Ventricular Fibrillation.* Ventricular fibrillation is a condition in which disordered electrical activity causes the ventricles to contract in a rapid, unsynchronized and uncoordinated fashion. When this occurs, an insufficient amount of blood is pumped from the heart. Ventricular fibrillation is the most common arrhythmia that causes sudden cardiac arrest. The onset of ventricular fibrillation often occurs without warning and causes the heart to stop abruptly. This sudden stopping of the heart is known as cardiac arrest, and is the cause of sudden cardiac death.

The only accepted treatment for ventricular fibrillation is defibrillation, in which a powerful electric shock is delivered to the heart to stop the fibrillation and permit the return of coordinated cardiac contractions. In emergency situations, external defibrillation has conventionally been administered through hand-held paddles placed on the patient's chest. However, external defibrillation can also be administered through disposable adhesive electrodes, which we believe are safer and easier to use than paddles.

In sudden unexpected cardiac arrest, current research shows that by the time a device arrives at the side of an arrest victim, about half are in ventricular fibrillation which requires immediate defibrillation according to current AHA recommendations. However, new research suggests that CPR before defibrillation in unwitnessed cardiac arrest may be more effective than immediate defibrillation and the AHA is expected to review their current recommendations relating to CPR and defibrillation during the development of new guidelines in 2004. With increased understanding of the mechanisms of cardiac arrest, the benefits of CPR, new technologies to improve circulatory support, and the lower incidence of ventricular fibrillation, we expect a growing emphasis on circulatory support in both the context of AED use and the AHA's efforts to reduce deaths from sudden cardiac arrest.

*Atrial Fibrillation.* The AHA estimates that close to 2 million Americans suffer from atrial fibrillation. Atrial fibrillation is a condition in which disordered electrical activity causes the atria to

contract in a rapid, unsynchronized and uncoordinated fashion. This inefficient contraction results in a smaller amount of blood entering the ventricles, which in turn results in an insufficient level of circulation. Since blood is not pumped completely out of the atria, the blood can pool and clot. While not immediately life threatening, atrial fibrillation can lead to significant health threats such as stroke. Over time, poorly functioning atria can also cause the ventricles to work harder, wear out sooner and eventually lead to cardiac arrest.

Common forms of treatment for atrial fibrillation include cardioversion and drug therapies. During cardioversion, a defibrillator delivers an electric shock that is synchronized with a patient's heartbeat in order to return the atria to a normal rhythm. Cardioversion is usually an elective therapy, scheduled and performed in a controlled environment. All of our manual defibrillators include cardioversion capability.

*Bradycardia.* Bradycardia is a condition in which the heart beats too slowly. The principal therapies for the emergency treatment of bradycardia are drugs and temporary cardiac pacing, either or both of which may be used to stimulate effective cardiac contractions and restore circulation. Cardiac pacing utilizes an electrical pulse to stimulate the patient's heartbeat. For the emergency treatment of bradycardia, there are two primary techniques for temporary pacing: invasive endocardial pacing, in which a wire is inserted directly into the heart to provide the electrical stimulus; and non-invasive temporary pacing, which uses gelled electrodes applied to the patient's chest to conduct an electrical stimulus. Non-invasive temporary pacing is an option on most of our defibrillators (not including AEDs) and is recommended as the first intervention for bradycardia in the AHA's resuscitation protocols.

## **Our Cardiac Resuscitation Products**

### *M Series Defibrillators*

The M Series is an extensive line of defibrillators for both the hospital and pre-hospital markets. We currently sell 11 models of this device ranging in list price from \$5,500 to \$31,000. The large number of models reflects user selection and need for various features and options such as shock advisory capability, 12 lead ECG and diagnostic operation, or data transmission features. The M Series defibrillator is our best selling product to date and has been selected as the standard device in such places as The Mayo Clinic, Scripps Health System, The Johns Hopkins Hospitals, the U.S. Armed Forces, and the German Army. We believe the clinical superiority of our biphasic waveform combined with product advantages including portability, ease-of-use and the vivid screen display offer compelling reasons for customers to choose our M Series defibrillators. Our M Series is a standardized platform that allows for expandable features. As a result, we believe that this will help maximize customer retention by reducing the need for operator retraining and enhancing operator confidence.

We believe that our standard M Series defibrillators offer the following competitive advantages.

- *Portability.* The M Series defibrillator is the smallest, lightest fully-featured external defibrillator. It is significantly less in size and weight than other leading devices in this class. This allows M Series defibrillators to be easily used, carried, and transported with patients.
- *Ease-of-use with Simple Controls.* The M Series defibrillators enable users to efficiently configure each unit, allowing local operating preferences to be individually programmed into each unit. Additionally, M Series defibrillators offer multiple language labeling as well as multiple language voice prompts to meet both domestic and international needs.
- *Vivid Screen Display.* One of the distinguishing features included in M Series defibrillators is their high contrast screen. Our screen incorporates the most technologically advanced defibrillator display with a wider viewing angle than any LCD display.
- *Clinical Performance.* Our proprietary pacing technology was demonstrated clinically to have therapeutic advantages over other manufacturers' designs. A number of clinical studies formed the basis for this superiority. In the area of defibrillation waveforms, the ZOLL Rectilinear Biphasic ("RLB") Waveform is the only biphasic waveform to have clinically demonstrated superiority to

monophasic waveforms for the defibrillation of ventricular fibrillation in high impedance patients, and it has also been shown to be superior in the cardioversion of atrial fibrillation than monophasic waveforms.

The M Series defibrillators are designed to be upgradeable, allowing customers to add features depending upon their individual needs. The M Series defibrillators use our unique pacing technology, which has been clinically shown to provide superior capture rates, lower mean capture thresholds, less muscle impact and better patient tolerance. The M Series defibrillators are also available with our patented biphasic waveform. Some of the features that we currently offer include the following.

- *Complete Data Management.* A code marker system follows protocols established by the AHA and allows complete documentation of an event with our unique “one touch” data annotation feature. The record made of the event includes all information collected by the defibrillator and can be upgraded to include an optional voice recording. All of this data is stored on a removable data card. This data is also able to be transmitted electronically to other devices via a serial port, built in modem and Bluetooth® wireless communications. This allows users significant flexibility in moving data for purposes of remote consultation and recordkeeping. We have also developed software applications for the archiving and trending of information related to resuscitation. A number of integrated software applications are called RescueNet in the pre-hospital market and CodeNet™ for in-hospital use.
- *Diagnostic 12 Lead ECG with Interpretive Algorithm.* The 12 lead feature enables a user to see a diagnostic ECG, tracing or views, of the heart’s electrical activity. 12 lead is used to provide rapid and early identification of myocardial infarction, commonly called a heart attack, in the pre-hospital setting. We pay royalties to GE Medical Systems (“GEMS”) on each 12 lead analysis program we sell.
- *GEMS Muse Cardiology Information System.* Our M Series defibrillators communicate directly with the GEMS Information Technologies’ MUSE CV® cardiology information system. This MUSE interface provides direct communication of pre-hospital 12 lead ECG data into GE’s family of cardiovascular information systems, eliminating the need for a dedicated receiving station or gateway.
- *Pulse Oximetry.* Pulse oximeters determine the oxygen saturation levels in blood, allowing a rapid identification of potential problems in the cardiopulmonary system. Since pulse oximeters can help detect the onset of cardiovascular incidents, pulse oximetry is now widely used in both hospital and pre-hospital settings when monitoring patients’ vital signs. While conventional pulse oximeters do not perform well during patient motion or in intense light, we use Masimo Corporation’s patented technology that is designed to overcome these technical problems. We purchase circuit boards and sensors from Masimo Corporation. We have a non-exclusive license to use the patented technology incorporated in these parts that we then incorporate into our products.
- *Capnography.* Capnography, also known as EtCO<sub>2</sub>, is the measurement of the amount of carbon dioxide being exhaled, allowing for rapid identification of potential problems in the cardiopulmonary system. We purchase circuit boards and sensors from Respironics to provide this feature.
- *Non-invasive Blood Pressure Measurement.* We developed a non-invasive blood pressure measurement capability, also known as NIBP, and integrated it into our M Series defibrillators. We purchase circuit boards, hoses and cuffs from SunTech Medical to provide this feature.

### ***Critical Care Transport (CCT) Defibrillators***

In October 2001, we introduced our newest M Series model that has been designed for critical care transport, the CCT. Based on an M Series platform, this new model incorporates the same defibrillation and pacing technologies and general elements of the M Series design but adds significantly expanded monitoring, battery capacity, and display capabilities. The CCT has a larger color display that shows three

traces simultaneously, combined with the addition of invasive blood pressure measurement capability and temperature monitoring. This model is also certified airworthy for military applications.

### *AED Plus Defibrillators*

In March 2002, we introduced a new automated external defibrillator, called the AED Plus, designed for the public safety, first responder and public access segments of the defibrillator market. This product is a simplified device designed for infrequent use and incorporates new features to assist rescuers in administering defibrillation and CPR. In addition to the device, we also introduced a new and unique one-piece, long shelf life (four years) electrode system called CPR-D Padz as a key accessory to the device. The device and electrode system incorporate a unique instantaneous CPR feedback system that helps rescuers perform CPR according to the AHA and the European Resuscitation Council ("ERC") guidelines. Other unique features include an LCD display that can be configured to display the ECG, a highly graphical interface to remind rescuers how to use the device properly to follow the recommended life-saving steps in the AHA's Chain of Survival, use of consumer lithium batteries for power available locally and at low cost, and the incorporation of an Infrared-based communications system for managing data collected during the use of the device. Support products include a training unit that mimics the device's operation and is used to teach early defibrillation and CPR skills, simulators to demonstrate and test operation of the unit, carrying cases, wall boxes, and training materials.

### *Biphasic Waveforms*

External defibrillators deliver current over time to the heart, which results in a defined waveform shape. The waveform in general use today is monophasic, meaning that current is delivered in a single pulse that flows in one direction. A biphasic waveform, in contrast, delivers current that first flows in a positive direction for a period of time and then reverses direction so that it flows in a negative direction. Typical biphasic waveforms appear to achieve the same defibrillation success rates as monophasic waveforms but at significantly lower current levels. Since less current is used, potential injury to the heart and skin is reduced with a biphasic shock compared to a monophasic shock. All of the major manufacturers of external defibrillators produce devices that use biphasic waveforms.

Biphasic waveforms are the first major advance in defibrillation technology since the current monophasic waveform was adopted in the early 1960's. Although there have been feature enhancements that make new monophasic defibrillators easier to use and maintain, they have not proven to make defibrillators more clinically effective or safer and thus have not rendered the older models obsolete. At present, users generally replace existing defibrillators for mechanical and other reasons unrelated to any clinical superiority of a new defibrillator. Based on our sales and marketing experience, we estimate that hospital users replace defibrillators after approximately seven to ten years of service. In light of the demonstrated clinical superiority of biphasic technology, however, we believe that the introduction of biphasic waveforms has accelerated the replacement of the large installed base of monophasic defibrillators. We believe this accelerated replacement has increased the size of the market for our defibrillators. Biphasic waveforms for conventional defibrillators used in hospitals and EMS services by trained users were first introduced in 1996. Based on our estimates of the replacement of monophasic defibrillators with biphasic devices, the installed base of defibrillators should be predominately biphasic by approximately 2010.

### *Our Biphasic Waveform*

Our primary competitors offer biphasic waveforms using the same general shape. However, we have developed a uniquely shaped biphasic waveform which achieves higher efficacy at lower current levels than monophasic waveforms. Our biphasic waveform reduces the heart's exposure to high peak current. In addition, our biphasic waveform keeps the waveform shape and duration constant over a wide range of patients whose differing physiologies impact the conduction of current.

We have sponsored two clinical trials that have demonstrated that our proprietary biphasic waveform provides improved efficacy compared to conventional monophasic waveforms in high impedance patients. High impedance is generally associated with more difficulty in defibrillation. In a randomized study for ventricular fibrillation of 184 patients, our biphasic waveform converted 99% of patients on the first shock compared to 93% of patients converted with the monophasic waveform. This compares favorably with the results obtained by other parties in similar trials. A second randomized trial of 165 patients compared the efficacy of our biphasic waveform to a conventional monophasic waveform for cardioversion of atrial fibrillation. Our investigators reported a 68% first shock efficacy for our waveform compared to just 21% for a conventional monophasic waveform. Overall, 94% of the patients randomized to our biphasic waveform were successfully cardioverted as compared to 79% of the patients treated with a monophasic waveform. These studies also showed that our waveform required less than half the current for converting ventricular and atrial fibrillation than the conventional monophasic waveform.

We sponsored a trial in the City of Omaha, Nebraska Fire Department which provided the first report of our biphasic waveform to improve resuscitation rates in a pre-hospital Basic Life Support ("BLS") setting compared to historic Monophasic Damped Sine ("MDS") defibrillation effectiveness. There were a total of 294 patients in the study. Our biphasic waveform showed a significantly higher first shock success rate (67%) compared to the initial MDS shocks (48%,  $p < 0.0025$ ). Rates of Return of Spontaneous Circulation ("ROSC") were improved for our biphasic waveform versus MDS (35% versus 26%). Our biphasic waveform shocked the patients to a normal sinus rhythm ROSC with significantly greater rates than the MDS waveform (25% versus 15%,  $p < 0.05$ ).

We recently sponsored ORBIT (Out of Hospital Rectilinear Biphasic Investigation and Trial) which analyzed 436 cardiac arrest patients. ORBIT is the world's largest and most comprehensive study ever undertaken in an out-of-hospital setting to look at the advantages of biphasic waveforms for defibrillation. The trial was the first of its kind to look at the effectiveness of biphasic defibrillation in the Advanced Life Support setting, where down times can be significantly longer than those in the BLS setting. The interim results, presented at the American Heart Association Convention in November 2003, showed an improvement in shock success from 45% to 54% over the monophasic waveform at a p value of 0.06.

Our M Series defibrillator equipped with our biphasic waveform is the only device cleared by the FDA to be labeled clinically superior to monophasic defibrillators for conversion of ventricular fibrillation in high-impedance patients, those patients who are difficult to defibrillate, and for cardioversion of all atrial fibrillation patients. We therefore believe that our proprietary biphasic waveform is superior to the biphasic waveform utilized by any of our competitors. We believe that our proprietary biphasic waveform will offer compelling clinical benefits that should give customers a reason to choose our biphasic defibrillators over those of our competitors.

We have received seven U.S. patents covering various aspects of our novel biphasic waveform technology. Several corresponding foreign patents are still pending.

### ***Disposable Electrodes***

We offer a variety of single-patient-use, proprietary disposable electrodes for use with our resuscitation devices. Among our primary competitors, we are the only company to engineer and manufacture our own electrodes. We have continually innovated and upgraded our electrode product line, including the pro-padz™ Biphasic Multi-function Electrodes specifically designed for use with the ZOLL Rectilinear Biphasic waveform for cardioversion of atrial fibrillation. In fiscal 2002, we introduced, in conjunction with our AED Plus defibrillator, the unique one-piece CPR-D Padz electrode, which provides feedback on the quality of CPR compressions. Our margins for electrodes are generally higher than our margins for devices. We hope to sell more disposable electrodes in the future as more customers recognize the benefits of electrodes, which are safer than traditional paddles for an operator of a defibrillator. Another factor that might lead to higher electrode sales is the use of interpretive algorithms for automated defibrillation. The monitoring required to assess the patient's condition can only be achieved with electrodes and not with the traditional defibrillation paddles. Additionally, the use of automated external defibrillators in non-medical

settings, and the CPR-D Padz electrode introduced with the AED Plus, will also contribute to our electrode revenues in the future.

### **Our Current Market**

We divide our market for non-invasive cardiac resuscitation equipment into three principal customer/geographic categories: North American hospital; North American pre-hospital, which consists of a public safety segment and a public access segment; and International. The pre-hospital public safety segment consists of care providers such as paramedics, ambulance operators, emergency medical technicians, firefighters, police and other first response personnel with responsibilities for public safety. The pre-hospital public access segment includes non-traditional responders to medical emergencies who have been trained to use automated external defibrillators. This would include security personnel, staffs in occupational settings, school personnel, and office staff. The International segment includes both hospital and pre-hospital customers outside of North America. We estimate that the size of the worldwide market for external defibrillator products was approximately \$854 million in 2003. In North America we estimate the hospital segment was approximately \$147 million and the pre-hospital segment \$265 million. International market size was estimated at \$323 million for all segments. The total worldwide market for lower cost AEDs, which overlaps with the other segments, we estimate, was \$204 million.

*North American Hospital Market.* The U.S. hospital market consists of approximately 6,000 acute care community hospitals and 1,000 additional hospitals. We also include military hospitals and applications in this market. Presently, ZOLL defibrillators are used extensively in the top 30 cardiac hospitals in the United States as listed by U.S. News and World Report in July 2003.

Hospitals have traditionally used cardiac resuscitation equipment, both for patients admitted with sudden cardiac arrest and for patients at risk of sudden cardiac arrest undergoing other treatments. Many hospital procedures such as surgery, cardiac catheterization, stress testing, and general anesthesia may induce arrhythmias or sudden cardiac arrest, and hospitals frequently use cardiac resuscitation devices on a standby basis in connection with these procedures. Since immediate treatment is the critical factor for successful cardiac resuscitation, hospitals typically place resuscitation devices throughout their facilities, including the cardiac and critical care units, emergency rooms, operating rooms, electrophysiology laboratories, and general wards. The importance of early defibrillation has also resulted in the installation of defibrillators with AED capability in hospital clinical areas for rapid use by the professional clinical staff. Lower cost simplified AEDs have also been installed in non-clinical areas such as lobbies, food service areas and parking facilities for operation by hospital staff, including security personnel, in the event of a cardiac arrest outside of patient units. Hospitals also use portable devices during in-hospital transportation of cardiac patients.

*North American Pre-hospital Market.* Most sudden cardiac arrests and heart attacks occur outside of the hospital. Due to the importance of immediate treatment, there is a substantial market for portable cardiac resuscitation equipment designed for use by various emergency responders. The most highly trained segment of the pre-hospital market is comprised of paramedics, who are authorized and trained to use defibrillators to treat sudden cardiac arrest. In addition, paramedics are becoming increasingly aware of external pacing as a standard of care for the treatment of bradycardia. We believe the use of combination pacemakers/defibrillators will become more widespread in the pre-hospital setting. Paramedics are also able to use more advanced diagnostics, such as diagnostic 12 lead. Emergency medical technicians, who are authorized to use automated external defibrillators, comprise a significant portion of the potential pre-hospital market as well.

We believe the opportunity for growth in the under-penetrated pre-hospital market encompassing public safety responders and vehicles is large. Presently, we believe that approximately 80% of the estimated 35,000 ambulances in the United States are equipped with defibrillators. We believe that the percentage of ambulances equipped with defibrillators will grow, and that ambulances and other first response emergency vehicles will represent an increasingly important market for cardiac resuscitation equipment as the medical community places increased priority on providing such equipment and the

necessary training to all first responders. We believe that as ambulances and other first responder emergency vehicles replace their older defibrillators with newer units, they will include additional monitoring parameters which we are positioned to capitalize upon.

*Public Access Defibrillation Market.* This market segment includes non-traditional, non-healthcare users of automated external defibrillators such as the AED Plus. This market segment is growing as the lifesaving potential of simplified lower cost devices, which can be used before the arrival of professional rescuers, becomes better known. Efforts by the AHA, American Red Cross, National Safety Council, and National Center for Early Defibrillation should expand public knowledge of AEDs and increase the demand for these devices.

Virtually any location with a large number of people has the potential for the purchase and installation of AEDs. Simplified operation and the incorporation of AED use in all CPR training exposes a large segment of the population to this lifesaving technology increasing awareness and adoption.

We expect this market to continue to expand, and the recent publication of an extensive study by the AHA and the National Heart, Lung & Blood Institute that concluded public access defibrillation saves lives otherwise lost to sudden cardiac arrest, affirms the public health benefit of the adoption of this technology.

*International Market.* The international market for defibrillators is less developed than the market in the United States. In some international markets, unlike the U.S. market, the administration of pacing and defibrillation in hospitals is generally viewed as a skill reserved for physicians. Few other staff members are trained to administer such treatment, although this is changing. The international market for defibrillators for use outside of hospitals varies considerably from country to country but is generally less developed than the market in North America.

We believe that the international market for defibrillators will grow for a number of reasons.

- The international hospital market for defibrillators is expected to grow as more hospitals are built and existing hospitals modernize and update their approaches to cardiac and emergency care.
- Emerging standards of care and the acceptance of automated equipment could result in increased use of cardiac resuscitation equipment by a broader range of healthcare personnel in the international market.
- The ERC, the British Heart Foundation, and virtually all cardiac-oriented organizations in Europe, as well as the Australian Resuscitation Council, have strongly supported initiatives to expand the availability of defibrillators as a major public health initiative.
- External pacing is used much less frequently in Europe and other parts of the world than it is in the United States, but many countries are beginning to implement cardiac life support protocols which incorporate external pacing as a standard component. Because most international defibrillators do not presently feature external pacing, the move to defibrillators with external pacing could drive the international demand for defibrillators. Our M Series defibrillators include external pacing.
- The market for public access defibrillation is rapidly growing in Europe and Australia as the governments of these regions have begun to lessen the restrictions on physician-only administration of defibrillation. As other international markets begin to follow, there will be additional opportunities for government-driven programs.

We believe that we are positioned to take advantage of the growth in the international market for defibrillators, based on the continued success of the M Series defibrillators, our superior biphasic waveform, the multiple language and other capabilities of the M Series defibrillators, and our new public access defibrillator, the AED Plus.

## **Our Market Opportunities**

### ***Public Access Defibrillation Using AEDs***

There are over 460,000 deaths each year from out-of-hospital cardiac arrest in the United States. Estimates say that more than half of these deaths occur suddenly. Most occur at home and up to a quarter occur in public places. Placing simplified automated external defibrillators, like the AED Plus, in the hands of designated first responders who can rapidly administer defibrillation is the most practical strategy to save lives since immediate defibrillation results in nearly 100% survival. In contrast, a delay of 4-5 minutes decreases survival to 15-40% and a delay of 10 minutes results in death 95% of the time.

With a growing understanding of this major public health problem in the United States and most developed countries, initiatives on many fronts across the world are underway to encourage the widespread deployment of defibrillators. The public access segment of the market is rapidly expanding. We believe this trend will continue since there is no other effective treatment for sudden cardiac arrest due to ventricular fibrillation other than defibrillation, and the capacity of public safety services to shorten response times from their current average of 8-15 minutes will always be limited. We also expect that the understanding of AED use and its relationship to CPR, as well as ongoing public health initiatives to reduce deaths and improve resuscitation outcomes associated with this major public health problem, will increase the demand for products designed to improve CPR and support for patients during resuscitation efforts.

The passage of Federal and State Good Samaritan legislation increases the likelihood that non-medically trained personnel will be providing care to victims of sudden cardiac arrest. The AHA and virtually all corresponding international organizations have established programs to bring early defibrillation to communities. Early defibrillation is included in the AHA CPR training for all healthcare personnel and some laypersons. In the U.S., government activities at both state and federal levels continue to promote placement of AEDs in schools, nursing homes, health clubs, and other public places. In addition, new legislation expands AED usage by non-traditional users including police, fire, and highway patrol personnel. In 2004, grant dollars are expected to be available through the Department of Homeland Security to purchase AEDs as well as traditional defibrillators with monitoring capabilities. We believe that these developments, together with the introduction of AEDs in highly visible places, will lead to a larger market for AEDs.

We are using a direct sales force to sell our AEDs to the public safety market and a mix of alternate distribution, including direct staff, distributors, and manufacturers' representatives, in those markets that are too small to support a direct sales force. We expect that this market can be serviced by other alternative distribution methods, such as e-commerce, that can supplement and reduce our need for an expensive sales force.

In June 2002, we signed an exclusive multi-year distribution agreement with GE Medical Systems Information Technologies to sell our AED Plus to physicians' offices and clinics throughout the U.S. This partnership affords us an excellent opportunity to expand into a relatively unpenetrated market.

### ***EMS Data Management Solutions***

We have developed a series of software products (RescueNet™) to address what we consider to be a growing need in the EMS market for an integrated data management system. RescueNet provides our customers with a single data management system that integrates dispatch, resuscitation information, field data collection, data transfer, billing, and quality assurance functions. With the seamless integration as the leverage, a majority of the EMS customers that purchase the billing solution also purchase the dispatch system and vice versa.

Today, most EMS data is entered by hand on clipboards and then distributed or re-entered manually into databases to meet regulatory and insurance reporting requirements. The timeliness, accuracy and efficiency of this process are key factors in the receipt of payments from third-party payers. Capturing the resuscitation information within the field data system and wirelessly downloading all the field data to the billing system provides great efficiency. A significant amount of revenue is lost due to data entry errors,

and misplaced paperwork or data. Time is lost duplicating data entries. As a result, we believe that the market for EMS field data management is significant and relatively unpenetrated.

## **Competition**

Our principal competitors in the United States are Physio-Control Corporation and Royal Philips Electronics. Physio-Control is a subsidiary of Medtronic, Inc., a leading medical technology company. Both Physio-Control and Philips compete across our entire defibrillator product line. We also compete with Cardiac Science, Inc., Welch Allyn (formerly Medical Research Labs, MRL), Access Cardiosystems, Heart Sine Technologies, and Defib Tech in the lower cost AED market segment. In the international market we compete with Physio-Control, Philips, most AED competitors, and several other companies depending upon the country. Physio-Control is generally the market leader in the industry.

We believe that the principal competitive factors in the hospital market for cardiac resuscitation equipment are clinical efficacy, reliability, portability, ease-of-use, and standardization. In the pre-hospital market, in addition to the foregoing considerations, durability, a reliable battery system, and availability of 12 lead ECG capabilities, are significant competitive factors. We believe that our products compete favorably with respect to each of these factors. Non-invasive temporary pacemakers and external defibrillators, such as those we sell, are used in emergency situations and, accordingly, do not compete with permanent, implantable pacemakers or defibrillators that are used to treat chronic arrhythmias. In fact, the products are complementary, because emergency cardiac resuscitation is often required during the implantation of a permanent device. We believe that the principal competitive factors in the AED market are the ability to enable rescuers to respond more rapidly and effectively, providing assistance in the administration of CPR, having a single electrode pad that is easy to position on the victim's body, and using off-the-shelf affordable consumer batteries. Our AED Plus competes favorably with respect to each of these factors.

The business of developing and marketing software for data collection, billing, dispatching and management in the EMS market is competitive. Competitors in this business include Medusa Medical Technologies, Inc., Healthware Technologies, Inc., Safety Pad Software, Golden Hour Data Systems, DocuMed, Inc., Tritech Software Systems, Inc., Sweet Computer Services, Inc., RAM Software Systems, Inc., Intergraph Corporation and AmbPac, Inc. None of these competitors currently have a product that provides an integrated solution comparable to the RescueNet products. Physio-Control and Medusa have a marketing arrangement through which Physio-Control's salespeople are promoting the Medusa field data solution.

## **Research and Development**

Our research and development strategy is to improve and expand our product line through the application of our proprietary technology to devices, electrodes and software. We pursue a multi-disciplinary approach to product design. We are currently focusing our research and development programs on data management, product variants of the M Series and AED Plus product lines, continued clinical trials, expansion of our long-term technical research efforts, and other initiatives.

## **Manufacturing**

Our manufacturing facilities are located in Chelmsford, Massachusetts and Pawtucket, Rhode Island. In Chelmsford, we generally assemble our devices from components produced to our specifications by our suppliers. In Pawtucket, we manufacture our electrode products.

## **Patents and Proprietary Information**

Seven U.S. patents have now been issued covering various aspects of our unique biphasic waveform technology. Several corresponding foreign patents relating to this waveform technology are still pending.

We have filed several new U.S. and foreign patent applications covering novel technology related to our pacing and defibrillation electrodes. One electrode patent was issued during 2003 and several others are still pending. These patents supplement other electrode patents issued in the United States, Europe and Japan. During 2002, we filed several U.S. patent applications for our new AED Plus defibrillator. Two patents have been issued and others are still pending. During 2003, we filed additional patent applications related to new AED Plus features. These patents are currently pending.

A number of U.S. and foreign patents covering technologies incorporated into our other products have been issued.

### **Employees**

As of September 28, 2003, we employed 844 people on a full-time basis, 766 in the United States and 78 internationally. We also employed 18 part-time employees. None of our employees are subject to collective bargaining agreements. We believe that our relations with our employees are excellent.

### **Marketing and Sales**

We use a direct sales force in the United States, split into dedicated groups, focused on the hospital, pre-hospital, and public access markets. We sell our RescueNet products through a separate dedicated sales force. In the United States, we currently have 65 sales representatives and managers calling on hospitals, 71 calling on pre-hospital accounts, 17 calling on public access accounts (both direct customers and distributors), and eight selling our data management products. Internationally, we have nine sales representatives in Canada, nine in the United Kingdom, one in the Netherlands, five in France, seven in Australia, six in Germany, one in Austria, and 10 international territory managers handling our sales where we sell through local distributors.

We do not typically maintain a significant backlog in our business. As a result, our backlog typically represents a couple of weeks or less of average shipments. Our backlog typically does not materially affect our sales in subsequent periods. Therefore, our sales force must sell most of each quarter's revenue in that quarter.

### **Government Regulation**

The manufacture and sale of our products are subject to extensive regulation by numerous governmental authorities, principally by the FDA and corresponding foreign agencies. The FDA administers the Federal Food, Drug and Cosmetic Act and the regulations promulgated there under. We are subject to the standards and procedures with respect to the manufacture of medical devices and are subject to inspection by the FDA for compliance with such standards and procedures.

The FDA classifies medical devices into one of three classes depending on the degree of risk associated with each medical device and the extent of control needed to ensure safety and effectiveness. Our manual defibrillation and pacing products have been classified by the FDA as Class II devices. Our AED products have been classified as Class III devices. These devices must secure a 510(k) pre-market notification clearance before they can be introduced into the United States market. The process of obtaining 510(k) clearance typically takes several months and may involve the submission of limited clinical data supporting assertions that the product is substantially equivalent to an already approved device or to a device that was on the market before the enactment of the Medical Device Amendments of 1976. Every company that manufactures or assembles medical devices is required to register with the FDA and to adhere to certain "good manufacturing practices (per the FDA's Quality System Regulation)" which regulate the manufacture of medical devices and prescribe record keeping procedures and provide for the routine inspection of facilities for compliance with such regulations. The FDA also has broad regulatory powers in the areas of clinical testing, marketing and advertising of medical devices.

Medical device manufacturers are routinely subject to periodic inspections by the FDA. If the FDA believes that a company may not be operating in compliance with applicable laws and regulations, it can:

- place the company under observation and re-inspect the facilities;

- issue a warning letter apprising of violating conduct;
- detain or seize products;
- mandate a recall;
- enjoin future violations; and
- assess civil and criminal penalties against the company, its officers or its employees.

We are also subject to regulation in each of the foreign countries in which we sell our products. Many of the regulations applicable to our products in such countries are similar to those of the FDA. The national health or social security organizations of certain countries require our products to be qualified before they can be marketed in those countries.

### **Investor Information**

Financial and other information relating to the Company can be accessed from the Company's main Internet website (<http://www.zoll.com>) by clicking on "Investor Relations". Information on our website is not part of our annual report. The Company makes available, free of charge, copies of its annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after filing such material electronically or otherwise furnishing it to the SEC. A copy may also be obtained upon written request to the Company at: Stockholder Relations, ZOLL Medical Corporation, 269 Mill Road, Chelmsford, MA 01824-4105.

### **Risk Factors**

#### ***If We Fail to Compete Successfully in the Future against Existing or Potential Competitors, Our Operating Results May Be Adversely Affected***

Our principal global competitors with respect to our entire cardiac resuscitation equipment product line are Physio-Control Corporation and Royal Philips Electronics. Physio-Control is a subsidiary of Medtronic, Inc., a leading medical technology company. Physio-Control has been the market leader in the defibrillator industry for over twenty years. As a result of Physio-Control's dominant position in this industry, many potential customers have relationships with Physio-Control that could make it difficult for us to continue to penetrate the markets for our products. In addition, Physio-Control, its parent and Royal Philips Electronics and other competitors each have significantly greater resources than we do. Accordingly, Physio-Control, Royal Philips Electronics and other competitors could substantially increase the resources they devote to the development and marketing of products that are competitive with ours. These and other competitors may develop and successfully commercialize medical devices that directly or indirectly accomplish what our products are designed to accomplish in a superior and/or less expensive manner. In addition, although our biphasic waveform technology is unique, our competitors have devised alternative biphasic waveform technology. We have also licensed our biphasic waveform technology to GE Medical Systems Information Technologies.

There are a number of smaller competitors in the United States, which include Welch Allyn, Inc. (formerly MRL), Cardiac Science, Inc., Cardio Access and Defibtech. Internationally, we face the same competitors as in the United States as well as Nihon Kohden, Corpuls, Schiller, and other local competitors. It is possible the market may embrace these competitors' products which could negatively impact our market share.

In addition to external defibrillation and external pacing with cardiac resuscitation equipment, it is possible that other alternative therapeutic approaches to the treatment of sudden cardiac arrest may be developed. These alternative therapies or approaches, including pharmaceutical or other alternatives, could prove to be superior to our products.

There is significant competition in the business of developing and marketing software for data collection, billing, dispatching and management in the emergency medical system market. Our principal competitors in this business include Medusa Medical Technologies, Inc. Healthware Technologies, Inc., Safety Pad Software, Golden Hour Data Systems, DocuMed, Inc., Trittech Software Systems, Inc., Sweet Computer Services, Inc., RAM Software Systems, Inc., Intergraph Corporation and AmbPac, Inc., some of which have greater financial, technical, research and development and marketing resources than we do. Because the barriers to entry in this business are relatively low, additional competitors may easily enter this market in the future. It is possible that systems developed by competitors could be superior to our data management system. Consequently, our ability to sell our data management system could be materially affected and our financial results could be materially and adversely affected.

***Our Operating Results are Likely to Fluctuate Which Could Cause Our Stock Price to be Volatile, and the Anticipation of a Volatile Stock Price Can Cause Greater Volatility***

Our quarterly and annual operating results have fluctuated and may continue to fluctuate. Various factors have and may continue to affect our operating results, including:

- high demand for our products which could disrupt our normal factory utilization and cause shipments to occur in uneven patterns;
- variations in product orders;
- timing of new product introductions;
- temporary disruptions on buying behavior due to changes in technology (e.g. shift to biphasic technology);
- changes in distribution channels;
- actions taken by our competitors such as the introduction of new products or the offering of sales incentives;
- the ability of our sales forces to effectively market our products;
- supply interruptions from our single source vendors;
- temporary manufacturing disruptions;
- regulatory actions, including actions taken by the FDA or similar agencies; and
- delays in obtaining domestic or foreign regulatory approvals.

A large percentage of our sales are made toward the end of each quarter. As a consequence, our quarterly financial results are often dependent on the receipt of customer orders in the last weeks of a quarter. The absence of these orders could cause us to fall short of our quarterly sales targets, which in turn could cause our stock price to decline sharply. As we grow in size, and these orders are received closer to the end of a period, we may not be able to manufacture, test, and ship all orders in time to recognize as revenue for that quarter.

Based on these factors, period-to-period comparisons should not be relied upon as indications of future performance. In anticipation of less successful quarterly results, parties may take short positions in our stock. The actions of parties shorting our stock might cause even more volatility in our stock price. The volatility of our stock may cause the value of a stockholder's investment to decline rapidly.

***The AED PAD (Public Access Defibrillation) Business is New to Us. If We are Not Successful in Entering This Business Segment, Our Operating Results May be Affected***

The PAD market is a new market for us and has many new dynamics. This market involves many new types of non-traditional healthcare distributors, and the efficiency of these distributors may not be as robust as we expect. These new types of distributors may present credit risks since they may not be well

established and may not have the necessary business volumes. In addition, we may not be successful in gaining market acceptance of our AED Plus into alternative PAD markets if our PAD Distributors are not successful. Also, our focus upon the PAD market may distract our operations from our core M Series business. All of these items could cause our operating results to be unfavorably affected.

We have noticed that as the PAD market has grown, there have been an increasing number of smaller, start-up companies entering the market. In order to gain market share, these companies compete mainly on price. If these companies are able to capture a larger market share with lower prices, this may cause declining prices and negatively affect our operating results.

Two of our major competitors have announced plans to enter the home market. We also sell to the home market and if our plan turns out to be less effective or efficient, we might have difficulty building market share.

#### ***We May be Required to Implement a Costly Product Recall***

In the event that any of our products proves to be defective, we can voluntarily recall, or the FDA could require us to redesign or implement a recall of any of our products. Both our larger competitors and we have, on numerous occasions, voluntarily recalled products in the past, and based on this experience, we believe that future recalls could result in significant costs to us and significant adverse publicity, which could harm our ability to market our products in the future. Though it is not possible to quantify the economic impact of a recall, it could have a material adverse effect on our business, financial condition and results of operations. For example, on June 25, 2003, we initiated a recall of approximately 8,000 M Series units to correct a potential fault with a vendors' component that could occur during its operation. Very few of these units contained the faulty component. The cost of implementing this corrective action was less than \$100,000.

#### ***Changes in the Healthcare Industry May Require Us to Decrease the Selling Price for Our Products or Could Result in a Reduction in the Size of the Market for Our Products, Each of Which Could Have a Negative Impact on Our Financial Performance***

Trends toward managed care, healthcare cost containment, and other changes in government and private sector initiatives in the United States and other countries in which we do business are placing increased emphasis on the delivery of more cost-effective medical therapies which could adversely affect the sale and/or the prices of our products. For example:

- major third-party payers of hospital and pre-hospital services, including Medicare, Medicaid and private healthcare insurers, have substantially revised their payment methodologies during the last few years which has resulted in stricter standards for reimbursement of hospital and pre-hospital charges for certain medical procedures;
- Medicare, Medicaid and private healthcare insurer cutbacks could create downward price pressure in the cardiac resuscitation pre-hospital market;
- numerous legislative proposals have been considered that would result in major reforms in the U.S. healthcare system that could have an adverse effect on our business;
- there has been a consolidation among healthcare facilities and purchasers of medical devices in the United States who prefer to limit the number of suppliers from whom they purchase medical products, and these entities may decide to stop purchasing our products or demand discounts on our prices;
- there is economic pressure to contain healthcare costs in international markets;
- there are proposed and existing laws and regulations in domestic and international markets regulating pricing and profitability of companies in the healthcare industry; and

- there have been initiatives by third party payers to challenge the prices charged for medical products which could affect our ability to sell products on a competitive basis.

Both the pressure to reduce prices for our products in response to these trends and the decrease in the size of the market as a result of these trends could adversely affect our levels of revenues and profitability of sales, which could have a material adverse effect on our business.

***General Economic Conditions May Cause Our Customers to Delay Buying Our Products Resulting in Lower Revenues***

The national economy of the United States and the global economy are both subject to economic downturns. An economic downturn in any market in which we sell our products may have a significant impact on the ability of our customers, in both the hospital and pre-hospital markets, to secure adequate funding to buy our products or might cause purchasing decisions to be delayed. Any delay in purchasing our products may result in decreased revenues and also allow our competitors additional time to develop products which may have a competitive edge over our M Series products, making future sales of our products more difficult.

For example, in the face of a difficult economic climate in the U.S., many states experienced deficits and shortfalls of revenue to cover expenditures. As a result, states cut their spending and support to local cities and towns, who then in-turn have reduced their spending for capital equipment purchases for their EMS services. We believe that this has had a negative impact on our revenues and may continue to do so.

***The War on Terrorism and the Impact of a Bio-Terror Threat May Cause Our Customers to Stop or Delay Buying Our Products, Resulting in Lower Revenues***

The current war on terrorism and a threat of a bio-terror attack may have a significant impact on our customers' ability or willingness to buy our products, as well as our ability to timely deliver the product to the customers. Our customers may have to divert their funding, earmarked for capital equipment purchases to the purchase of other medical equipment and supplies to fight any potential bio-terror attack. The war on terrorism may cause the diversion of any government funding of hospitals and EMS services for capital equipment purchases to the war effort. This could result in decreased revenues.

***We can be Sued for Producing Defective Products and We May be Required to Pay Significant Amounts to Those Harmed If We are Found Liable, and Our Business Could Suffer from Adverse Publicity***

The manufacture and sale of medical products such as ours entail significant risk of product liability claims. Our quality control standards comply with FDA requirements and we believe that the amount of product liability insurance we maintain is adequate based on past product liability claims in our industry. We cannot be assured that the amount of such insurance will be sufficient to satisfy claims made against us in the future or that we will be able to maintain insurance in the future at satisfactory rates or in adequate amounts. Product liability claims could result in significant costs or litigation. A successful claim brought against us in excess of our available insurance coverage or any claim that results in significant adverse publicity against us could have a material adverse effect on our business, financial condition and results of operations.

***Recurring Sales of Electrodes to Our Customers May Decline***

We typically have recurring sales of electrodes to our customers. Other vendors have developed electrode adaptors which allow generic electrodes to be compatible with our defibrillators. If we are unable to continue to differentiate the superiority of our electrodes over these generic electrodes, our future revenue from the sale of electrodes could be reduced.

***Failure to Produce New Products or Obtain Market Acceptance for Our New Products in a Timely Manner Could Harm Our Business***

Because substantially all of our revenue comes from the sale of cardiac resuscitation devices and related products, our financial performance will depend upon market acceptance of, and our ability to deliver and support, new products. We cannot be assured that we will be able to produce viable products in the time frames we currently estimate. Factors which could cause delay in these schedules or even cancellation of our projects to produce and market these new products include: research and development delays, the actions of our competitors producing competing products and the actions of other parties who may provide alternative therapies or solutions which could reduce or eliminate the markets for pending products.

The degree of market acceptance of any of our products will depend on a number of factors, including:

- our ability to develop and introduce new products in a timely manner;
- our ability to successfully implement new product technologies;
- the market's readiness to accept new products such as our data management products and our PAD product;
- the standardization of an automated platform for data management systems;
- the clinical efficacy of our products and the outcome of clinical trials;
- the ability to obtain timely regulatory approval for new products; and
- the prices of our products compared to the prices of our competitors' products.

If our new products do not achieve market acceptance, our financial performance could be adversely affected.

***Our Dependence on Sole and Single Source Suppliers Exposes Us to Supply Interruptions and Manufacturing Delays Caused by Faulty Components That Could Result in Product Delivery Delays and Substantial Costs to Redesign Our Products***

Although we use many standard parts and components for our products, some key components are purchased from sole or single source vendors for which alternative sources at present are not readily available. For example, we currently purchase proprietary components, including capacitors, display screens, gate arrays and integrated circuits, for which there are no direct substitutes. Our inability to obtain sufficient quantities of these components as well as our limited ability to deal with faulty components may result in future delays or reductions in product shipments which could cause a fluctuation in our results of operations.

These or any other components could be replaced with alternatives from other suppliers, which could involve a redesign of our products. Such a redesign could involve considerable time and expense. We could be at risk that the supplier might experience difficulties meeting our needs.

If our manufacturers are unable or unwilling to continue manufacturing our components in required volumes, we will have to transfer manufacturing to acceptable alternative manufacturers whom we have identified, which could result in significant interruptions of supply. The manufacture of these components is complex, and our reliance on the suppliers of these components exposes us to potential production difficulties and quality variations, which could negatively impact the cost and timely delivery of our products. Accordingly, any significant interruption in the supply, or degradation in the quality, of any component would have a material adverse effect on our business, financial condition and results of operations.

### *We May Not be Able to Obtain Appropriate Regulatory Approvals for Our New Products*

The manufacture and sale of our products are subject to regulation by numerous governmental authorities, principally the FDA and corresponding state and foreign agencies. The FDA administers the Federal Food, Drug and Cosmetic Act, as amended, and the rules and regulations promulgated hereunder. Some of our products have been classified by the FDA as Class II devices and others, such as our automated external defibrillators, have been classified as Class III devices. All of these devices must secure a 510(k) pre-market notification clearance before they can be introduced into the U.S. market. The process of obtaining 510(k) clearance typically takes several months and may involve the submission of limited clinical data supporting assertions that the product is substantially equivalent to an already approved device or to a device that was on the market before the Medical Device Amendments of 1976. Delays in obtaining 510(k) clearance could have an adverse effect on the introduction of future products. Moreover, approvals, if granted, may limit the uses for which a product may be marketed, which could reduce or eliminate the commercial benefit of manufacturing any such product.

We are also subject to regulation in each of the foreign countries in which we sell products. Many of the regulations applicable to our products in such countries are similar to those of the FDA. However, the national health or social security organizations of certain countries require our products to be qualified before they can be marketed in those countries. We cannot be assured that such clearances will be obtained.

### *If We Fail to Comply With Applicable Regulatory Laws and Regulations, The FDA and Other Foreign Regulatory Agencies Could Exercise Any of Their Regulatory Powers, which Could Have a Material Adverse Effect on Our Business*

Every company that manufactures or assembles medical devices is required to register with the FDA and to adhere to certain quality systems, which regulate the manufacture of medical devices and prescribe record keeping procedures and provide for the routine inspection of facilities for compliance with such regulations. The FDA also has broad regulatory powers in the areas of clinical testing, marketing and advertising of medical devices. To ensure that manufacturers adhere to good manufacturing practices, medical device manufacturers are routinely subject to periodic inspections by the FDA. If the FDA believes that a company may not be operating in compliance with applicable laws and regulations, it could take any of the following actions:

- place the company under observation and re-inspect the facilities;
- issue a warning letter apprising of violating conduct;
- detain or seize products;
- mandate a recall;
- enjoin future violations; and
- assess civil and criminal penalties against the company, its officers or its employees.

We, like most of our U.S. competitors, have received warning letters from the FDA in the past, and may receive warning letters in the future. We have always complied with the warning letters we have received. However, our failure to comply with FDA regulations could result in sanctions being imposed on us, including restrictions on the marketing or recall of our products. These sanctions could have a material adverse effect on our business.

If a foreign regulatory agency believes that we are not operating in compliance with their laws and regulations, they could prevent us from selling our products in their country, which could have a material adverse effect on our business.

***We are Dependent upon Licensed and Purchased Technology for Upgradeable Features in Our Products, and We May Not Be Able to Renew These Licenses or Purchase Agreements in the Future***

We license and purchase technology from third parties for upgradeable features in our products, including 12 lead analysis program, pulse oximetry, EtCO<sub>2</sub>, and NIBP technologies. We anticipate that we will need to license and purchase additional technology to remain competitive. We may not be able to renew our existing licenses and purchase agreements or to license and purchase other technologies on commercially reasonable terms or at all. If we are unable to renew our existing licenses and purchase agreements or we are unable to license or purchase new technologies, we may not be able to offer competitive products.

***Fluctuations in Currency Exchange Rates May Adversely Affect Our International Sales***

Our revenue from international operations can be denominated in or significantly influenced by the currency and general economic climate of the country in which we make sales. A decrease in the value of such foreign currencies relative to the U.S. dollar could result in downward price pressure for our products or losses from currency exchange rate fluctuations. As we continue to expand our international operations, downward price pressure and exposure to gains and losses on foreign currency transactions may increase.

We may continue our use of forward contracts and other instruments in the future to reduce our exposure to exchange rate fluctuations from intercompany accounts receivable denominated in foreign currencies, and we may not be able to do this successfully. Accordingly, we may experience economic loss and a negative impact on our results of operations and equity as a result of foreign currency exchange rate fluctuations.

***We Have Licensed Our Biphasic Technology to GE Medical Systems Information Technologies***

In 2001, we entered into a five-year license agreement with GE Medical Systems Information Technologies that permits GE to incorporate our patented biphasic waveform technology into their defibrillator and monitoring systems. At this time GE has taken only limited action to incorporate our technology into their products. However, GE has significantly greater resources than we do. If they bring our technology to market, it could impact our ability to market and sell our products, potentially lowering our revenues.

***Our Current and Future Investments May Lose Value in the Future***

We have made a \$12 million debt and equity investment in Revivant Corporation, a development stage company, with the option to purchase the remaining equity in October 2004. We also have a \$3.5 million investment in LifeCOR, Inc., a development stage company. In addition, we hold minor investments in Advanced Circulatory Systems, Inc. (formerly ResQSystems, Inc.) and AED@Home and may in the future invest in the securities of other companies and participate in joint venture agreements. These investments and future investments are subject to the risks that the entities in which we invest will become bankrupt or lose money. Investing in securities involves risks and no assurance can be made as to the profitability of any investment. Our inability to identify profitable investments could adversely affect our financial condition and results of operations. Unless we hold a majority position in an investment or joint venture, we will not be able to control all of the activities of the companies in which we invest or the joint ventures in which we are participating. Because of this, such entities may take actions against our wishes and not in furtherance of, and even opposed to, our business plans and objectives. These investments are also subject to the risk of impasse if no one party exercises ultimate control over the business decisions.

***Future Changes in Applicable Laws and Regulations Could Have an Adverse Effect on Our Business***

Although we are not aware of any pending changes in applicable laws and regulations governing our industry, we cannot be assured that federal, state or foreign governments will not change existing laws or regulations or adopt new laws or regulations that regulate our industry. Changes in or adoption of new laws

or regulations could result in the following consequences that would have an adverse effect on our business:

- regulatory clearance previously received for our products could be revoked;
- costs of compliance could increase; or
- we may be unable to comply with such laws and regulations so that we would be unable to sell our products.

***Uncertain Customer Decision Processes May Result in Long Sales Cycles Which Could Result in Unpredictable Fluctuations in Revenues and Delay the Replacement of Cardiac Resuscitation Devices***

Many of the customers in the pre-hospital market consist of municipal fire and emergency medical systems departments. As a result, there are numerous decision-makers and governmental procedures in the decision-making process. In addition, decisions at hospitals concerning the purchase of new medical devices are sometimes made on a department-by-department basis. Accordingly, we believe the purchasing decisions of many of our customers may be characterized by long decision-making processes, which have resulted in and may continue to result in long sales cycles for our products. For example, the sales cycles for cardiac resuscitation products typically have been between six and nine months, although some sales efforts have taken as long as two years.

***Our International Sales Expose Our Business to a Variety of Risks That Could Result in Significant Fluctuations in Our Results of Operations***

Approximately 26% of our sales for the twelve months ended September 28, 2003 were made to foreign purchasers and we plan to increase the sale of our products to foreign purchasers in the future. As a result, a significant portion of our sales is and will continue to be subject to the risks of international business, including:

- fluctuations in foreign currencies;
- trade disputes;
- changes in regulatory requirements, tariffs and other barriers;
- the possibility of quotas, duties, taxes or other changes or restrictions upon the importation or exportation of the products being implemented by the United States or these foreign countries;
- timing and availability of import/export licenses;
- political and economic instability;
- higher credit risk and difficulties in accounts receivable collections;
- increased tax exposure if our revenues in foreign countries are subject to taxation by more than one jurisdiction;
- accepting customer purchase orders governed by foreign laws which may differ significantly from U.S. laws and limit our ability to enforce our rights under such agreements and to collect damages, if awarded;
- war on terrorism;
- disruption in the international transportation industry; and
- use of international distributors

As international sales become a larger portion of our total sales, these risks could create significant fluctuations in our results of operations. These risks could affect our ability to resell trade-in products to domestic distributors, who in turn often resell the trade-in products in international markets. Our inability

to sell trade-in products might require us to offer lower trade-in values, which might impact our ability to sell new products to customers desiring to trade in older models and then purchase newer products.

We have recently expanded the size and number of our direct sales forces and our marketing support for these sales forces. We intend to continue to expand these areas, but if our sales forces are not effective, or if there is a sudden decrease in the markets where we have direct operations, we could be adversely affected.

***We May Fail to Adequately Protect or Enforce Our Intellectual Property Rights or Secure Rights to Third Party Intellectual Property, and Our Competitors Can Use Some of Our Previously Proprietary Technology***

Our success will depend in part on our ability to obtain and maintain patent protection for our products, methods, processes and other technologies, to preserve our trade secrets and to operate without infringing the proprietary rights of third parties. To date, we have been issued 25 U.S. patents for our various inventions and technologies. Additional patent applications have been filed with the U.S. Patent and Trademark Office and are currently pending. The patents that have been granted to us are for a definitive period of time and will expire. We have filed certain corresponding foreign patent applications and intend to file additional foreign and U.S. patent applications as appropriate. We cannot be assured as to:

- the degree and range of protection any patents will afford against competitors with similar products;
- if and when patents will be issued;
- whether or not others will obtain patents claiming aspects similar to those covered by our patent applications;
- whether or not competitors will use information contained in our expired patents;
- whether or not others will design around our patents or obtain access to our know-how; or
- the extent to which we will be successful in avoiding any patents granted to others.

We have, for example, patents and pending patent applications for our proprietary biphasic technology. Our competitors could develop biphasic technology that has comparable or superior clinical efficacy to our biphasic technology and if our patents do not adequately protect our technology, our competitors would be able to obtain patents claiming aspects similar to our biphasic technology or our competitors could design around our patents.

If certain patents issued to others are upheld or if certain patent applications filed by others issue and are upheld, we may be:

- required to obtain licenses or redesign our products or processes to avoid infringement;
- prevented from practicing the subject matter claimed in those patents; or
- required to pay damages.

There has been substantial litigation regarding patent and other intellectual property rights in the medical device industry. Litigation or administrative proceedings, including interference proceedings before the U.S. Patent and Trademark Office, related to intellectual property rights could be brought against us or be initiated by us. Adverse determinations in any patent litigation could subject us to significant liabilities to third parties, could require us to seek licenses from third parties and could, if licenses are not available, prevent us from manufacturing, selling or using certain of our products, some of which could have a material adverse effect on the Company. In addition, the costs of any such proceedings may be substantial whether or not we are successful.

Our success is also dependent upon the skills, knowledge and experience, none of which is patentable, of our scientific and technical personnel. To help protect our rights, we require all U.S. employees,

consultants and advisors to enter into confidentiality agreements, which prohibit the disclosure of confidential information to anyone outside of our Company and require disclosure and assignment to us of their ideas, developments, discoveries and inventions. We cannot be assured that these agreements will provide adequate protection for our trade secrets, know-how or other proprietary information in the event of any unauthorized use or disclosure of the lawful development by others of such information.

***Reliance on Overseas Vendors for Some of the Components for Our Products Exposes Us to International Business Risks, Which Could Have an Adverse Effect on Our Business***

Some of the components we use in our products are acquired from foreign manufacturers, particularly countries located in Europe and Asia. As a result, a significant portion of our purchases of components is subject to the risks of international business. The failure to obtain these components as a result of any of these risks can result in significant delivery delays of our products, which could have an adverse effect on our business.

***We May Acquire Other Businesses, and We May Have Difficulty Integrating These Businesses or Generating an Acceptable Return from Acquisitions***

We may attempt to acquire or make strategic investments in businesses and other assets. Such acquisitions will involve risks, including:

- the inability to achieve the strategic and operating goals of the acquisition;
- the inability to raise the required capital to fund the acquisition;
- difficulty in assimilating the acquired operations and personnel;
- disruption of our ongoing business; and
- inability to successfully incorporate acquired technology into our existing product lines and maintain uniform standards, controls, procedures and policies.

***Provisions in Our Charter Documents, Our Shareholder Rights Agreement and State Law May Make It Harder for Others To Obtain Control of ZOLL Even Though Some Stockholders Might Consider Such a Development to be Favorable***

Our board of directors has the authority to issue up to 1,000,000 shares of undesignated preferred stock and to determine the rights, preferences, privileges and restrictions of such shares without further vote or action by our stockholders. The rights of the holders of common stock will be subject to, and may be adversely affected by, the rights of the holders of any preferred stock that may be issued in the future. The issuance of preferred stock could have the effect of making it more difficult for third parties to acquire a majority of our outstanding voting stock. In addition, our restated articles of organization provide for staggered terms for the members of the board of directors which could delay or impede the removal of incumbent directors and could make a merger, tender offer or proxy contest involving the Company more difficult. Our restated articles of organization, restated by-laws and applicable Massachusetts law also impose various procedural and other requirements that could delay or make a merger, tender offer or proxy contest involving us more difficult.

We have also implemented a so-called poison pill by adopting our shareholders rights agreement. This poison pill significantly increases the costs that would be incurred by an unwanted third party acquirer if such party owns or announces its intent to commence a tender offer for more than 15% of our outstanding common stock. The existence of this poison pill could delay, deter or prevent a takeover of the Company.

All of these provisions could limit the price that investors might be willing to pay in the future for shares of our common stock which could preclude our shareholders from recognizing a premium over the prevailing market price of our stock.

***We Have Only One Manufacturing Facility for Each of Our Major Products and Any Damage or Incapacitation of Either of the Facilities Could Impede Our Ability to Produce These Products***

We have only one manufacturing facility, which produces defibrillators and one separate manufacturing facility which produces electrodes. Damage to either facility could render us unable to manufacture the relevant product or require us to reduce the output of products at the damaged facility. In addition, both of these facilities are located in the Northeastern United States. A severe weather event or other natural disaster occurring late in a quarter could make it difficult to meet product shipping targets. Any of these events could materially and adversely impact our business, financial condition and results of operations.

**Item 2. *Properties***

Our facilities are located in Chelmsford, Massachusetts and Pawtucket, Rhode Island. Our executive headquarters are located at the Chelmsford facility, along with our research and development and our device manufacturing operations. The Chelmsford, Massachusetts facility offers approximately 155,000 square feet of office, warehouse and assembly space. We own a 33,000 square foot building in Rhode Island, where we manufacture our electrode products and conduct related research and development. We own a 17,500 square foot building in Boulder, Colorado where our data management software business offices are located. We also have administrative offices in Manchester, England; Dodewaard, the Netherlands; Cologne, Germany; Sydney, Australia; and in Mississauga, Ontario, Canada.

**Item 3. *Legal Proceedings***

On November 25, 2002, we announced the settlement of a lawsuit that Cardiac Science, Inc. initiated in March 2002 asserting that we infringed upon two patents owned by them. The settlement includes the cross-licensing of a number of patents between us and Cardiac Science, Inc. We paid an initial licensing fee and will pay certain ongoing royalties to Cardiac Science, Inc. These amounts did not and will not have a material impact on our consolidated financial position and results of operations.

We are involved in the normal course of our business in various litigation matters and regulatory issues, including product recalls. Although we are unable to quantify at the present time the exact financial impact in any pending matters, we believe that none of the pending matters will have an outcome material to our financial condition or business.

**Item 4. *Submission of Matters to a Vote of Security Holders***

Not Applicable.

**PART II**

**Item 5. *Market for Registrant's Common Equity and Related Stockholder Matters***

The Company's Common Stock is traded on the National Association of Securities Dealers Automated Quotation (NASDAQ) National Market System under the symbol "ZOLL." The following table sets forth the high and low sales prices during the fiscal quarters specified:

	Sales Prices			
	2003		2002	
	High	Low	High	Low
First Quarter .....	\$40.00	\$29.76	\$42.10	\$31.56
Second Quarter .....	42.29	34.11	39.97	29.84
Third Quarter .....	41.83	29.26	42.07	32.26
Fourth Quarter .....	36.18	29.74	35.85	27.05

The Company has never declared or paid cash dividends on its capital stock. The Company currently intends to retain any current and future earnings to finance the growth and development of its business, and therefore does not anticipate paying any cash dividends in the foreseeable future.

As of December 9, 2003, there were 91 stockholders of record of the Company's Common Stock. The Company believes there were substantially in excess of 5,000 beneficial holders of the Common Stock.

### Equity Compensation Plan Information

<u>Plan Category</u>	<u>Number of securities to be issued upon exercise of outstanding options, warrants and rights</u>	<u>Weighted-average exercise price of outstanding options, warrants and rights</u>	<u>Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column a)</u>
Equity compensation plans approved by security holders . . . . .	1,289,000	\$32.75	127,000
Equity compensation plans not approved by security holders . . . . .	<u>—</u>	<u>—</u>	<u>—</u>
Total . . . . .	<u>1,289,000</u>	<u>\$32.75</u>	<u>127,000</u>

**Item 6. Selected Financial Data**

**ZOLL Medical Corporation Five Year Financial Summary**

	Fiscal Year				
	2003	2002	2001	2000	1999
	(000's omitted, except per share data)				
Income Statement Data:					
Net sales	\$184,603	\$150,227	\$119,202	\$106,336	\$78,682
Cost of goods sold	<u>81,477</u>	<u>65,274</u>	<u>52,684</u>	<u>46,351</u>	<u>32,486</u>
Gross profit	103,126	84,953	66,518	59,985	46,196
Expenses:					
Selling and marketing	59,461	48,645	38,208	31,238	24,364
General and administrative	12,404	11,193	9,605	8,606	7,422
Research and development	<u>14,115</u>	<u>11,536</u>	<u>10,231</u>	<u>7,973</u>	<u>6,916</u>
Total expenses	<u>85,980</u>	<u>71,374</u>	<u>58,044</u>	<u>47,817</u>	<u>38,702</u>
Income from operations	17,146	13,579	8,474	12,168	7,494
Investment and other income (expense)	<u>2,033</u>	<u>1,595</u>	<u>3,139</u>	<u>1,803</u>	<u>(45)</u>
Income before income taxes	19,179	15,174	11,613	13,971	7,449
Provision for income taxes	<u>6,329</u>	<u>4,944</u>	<u>4,051</u>	<u>5,169</u>	<u>2,010</u>
Net income	<u>12,850</u>	<u>\$ 10,230</u>	<u>\$ 7,562</u>	<u>\$ 8,802</u>	<u>\$ 5,439</u>
Basic earnings per common share	\$ 1.42	\$ 1.15	\$ 0.85	\$ 1.11	\$ 0.82
Weighted average common shares outstanding	<u>9,030</u>	<u>8,919</u>	<u>8,847</u>	<u>7,930</u>	<u>6,656</u>
Diluted earnings per common and common equivalent share	\$ 1.40	\$ 1.12	\$ 0.83	\$ 1.07	\$ 0.79
Weighted average common and common equivalent shares outstanding	<u>9,204</u>	<u>9,158</u>	<u>9,097</u>	<u>8,231</u>	<u>6,893</u>
Pro forma information(1):					
Historical income before taxes					\$ 7,449
Pro forma incremental operating costs					<u>272</u>
Pro forma income before income taxes					7,177
Pro forma provision for income taxes					<u>2,402</u>
Pro forma net income					<u>\$ 4,775</u>
Pro forma diluted earnings per share					<u>\$ 0.69</u>
Balance Sheet Data:					
Working capital	\$113,505	\$119,110	\$109,660	\$101,991	\$26,728
Total assets	\$192,096	\$165,854	\$144,388	\$137,808	\$59,687
Total long-term debt, excluding current portion	\$ —	\$ —	\$ —	\$ —	\$ 2,069
Stockholders' equity	<u>\$155,991</u>	<u>\$141,912</u>	<u>\$131,437</u>	<u>\$122,416</u>	<u>\$41,222</u>

(1) Pro forma information reflects the effect of (i) incremental operating costs expected to be incurred by the Company as a result of the Pinpoint merger and (ii) the provision for corporate income taxes on the previously untaxed Subchapter S corporation earnings of Pinpoint.

**Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

We intend for this discussion and analysis to provide you with information that will assist you in understanding our consolidated financial statements, the changes in certain key items in those consolidated financial statements from year to year and the primary factors that accounted for those changes. Our consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States. This discussion and analysis should be read in conjunction with our consolidated financial statements as of September 28, 2003 and for the year then ended and the notes accompanying those consolidated financial statements.

**2003 Compared to 2002**

Our net sales increased 23% in fiscal 2003 to a record \$184.6 million, up from \$150.2 million in the prior year, reflecting continued growth of our core M Series product as we continue to capture market share and the growing demand for our AED Plus ("Automated External Defibrillator") product.

Net sales by customer/product categories were as follows:

<u>(000's omitted)</u>	<u>2003</u>	<u>2002</u>
Hospital Market-North America .....	\$ 63,558	\$ 50,686
Pre-hospital Market-North America .....	55,357	46,958
Other North-America .....	19,602	19,372
International Market-excluding North America .....	46,086	33,211
	<u>\$184,603</u>	<u>\$150,227</u>

Total North American sales increased 18% to \$138.5 million in comparison to \$117.0 million for the same period a year earlier. Net sales to the North American hospital market totaled \$63.6 million, a 25% increase in comparison to \$50.7 million for the prior year. The increase was mainly due to \$12.5 million of M Series CCT shipments to the U.S. military for their PMI (Patient Movement Item) program. Without the U.S. military, our sales in the North American hospital market remained relatively flat year to year. We believe this was due to the slowdown in the North American economy. Our sales to the North American pre-hospital market increased 18% to \$55.4 million, up from \$47.0 million in the previous year. Increases in this market were primarily due to growth in our data management software revenues and growth in sales of our new AED Plus product.

Our AED Plus product has generated approximately \$18.8 million in total sales in its first full year, of which approximately 81% were sold in North America. This is compared to AED Plus sales of \$6.6 million last year, with approximately 79% sold in North America. This increase reflects the results of the addition of approximately 75 AED Plus distributors and manufacturer's representatives in the North American market along with the addition of in-house distributor managers and regional managers for this market and the addition to our direct sales force compared to the prior year.

International sales increased 39% to \$46.1 million in comparison to \$33.2 million for the prior year. This increase reflects continued growth in all of our direct sales organizations and in our International distributor sales, particularly in Europe, the Middle East and China. An increase in foreign currency exchange rates contributed approximately \$1.9 million to this increase.

Gross margins for fiscal 2003 decreased to 55.9%, from 56.5% in fiscal 2002. The decreased margins are due to sales to the U.S. military and increased sales to the German Army, which included volume discounts.

Selling and marketing expenses as a percentage of net sales remained consistent at 32%. Compared to the year ended September 29, 2002, selling and marketing expenses increased \$10.8 million or 22.2% for the year ended September 28, 2003. The increase in selling and marketing expense reflects additional wages and related benefits and travel for expansion of our PAD sales force where we have added new regional and distributor managers, our international sales operations where we have added people, our North American pre-hospital sales force where we have added people, our expanded U.S. sales

management team, our new U.S. training resources, expansion of our tradeshow participation, and increased advertising and other promotional costs.

General and administrative expenses decreased as a percentage of net sales to 6.7% from 7.5%, as we continued to leverage our personnel and our information technology investments. General and administrative expenses increased \$1.2 million or 10.8% for the year ended September 28, 2003, compared to the year ended September 29, 2002. The change from the comparable prior period primarily reflects an increase in wages and related benefits for an expanded headcount to support the larger organization, along with an increase in insurance premiums.

Research & Development ("R&D") expenses as a percentage of net sales remained consistent at 8%. R&D expenses increased \$2.6 million or 22.4% for the year ended September 28, 2003 compared to the year ended September 29, 2002. Our continued investment in research and development reflects significant resources devoted to data management, product variants of the M Series and AED Plus product lines, continued clinical trials, expansion of our long-term technical research efforts, and expansion of other initiatives.

Investment and other income increased to \$2.0 million in fiscal 2003, as compared to \$1.6 million in the previous year. This increase was primarily due to foreign exchange gains offset by lower investment earnings due to lower cash balances invested at lower interest rates over the prior year.

Our effective tax rate remained consistent at 33% for the year ended September 28, 2003, as compared to the same period in fiscal 2002, reflecting continued research and development credits for our R&D activity, along with foreign earnings taxed at differing rates, and the utilization of foreign loss carry forwards.

#### *Liquidity and Capital Resources*

Our cash, cash equivalents and marketable securities decreased from \$65.8 million to \$60.8 million, or approximately 8%, during fiscal 2003. Our cash and cash equivalents at September 28, 2003 totaled \$40.8 million compared to \$55.7 million at September 29, 2002. We had short-term investments amounting to \$20.0 million at September 28, 2003 in comparison to \$10.1 million at September 29, 2002.

Cash provided by operating activities for the year ended September 28, 2003 increased \$8.1 million to \$20 million as compared to \$11.9 million for the year ended September 29, 2002. This net increase was primarily attributable to a 25.6% rise in our net income year to year combined with a lower growth of our inventory and accounts receivable balances in 2003 compared to 2002. We also saw an increase in our depreciation expense in 2003 compared to 2002, which did not affect cash flow. This depreciation increase was due to prior years' increases in the deployment of demonstration units to our growing sales force along with the deployment of laptop computers to our North American sales force with the implementation of our CRM (Customer Relationship Management) tool. Another factor contributing to this rise in cash from operations was the timing of our fiscal year-end on September 28, 2003 which caused our accounts payable and accrued expenses to increase as payroll, rent, corporate taxes, and other vendor payments are not typically paid until the calendar month-end.

Cash used in investing activities was \$36.6 million for fiscal 2003 in comparison to \$2.2 million for fiscal 2002. This increase primarily reflects the fact that we used \$10 million of cash in 2003 for net purchases of marketable securities compared to the prior year when we received \$5.8 million of cash on the net sales of marketable securities. Cash was also used to purchase \$15.8 million of equity and debt investments in Revivant Corporation, LifeCOR, Inc., Advanced Circulatory Systems, Inc. (formerly ResQSystems, Inc.), and AED@home. Property, plant and equipment purchases increased \$2.6 million from the prior year which was primarily due to additional leasehold improvements for our new facility in Chelmsford, Massachusetts. Most of these leasehold improvements have been reimbursed to us by our landlord and will be accounted for as credits to rent expense over the life of our lease.

Cash provided by financing activities was \$1.2 million for fiscal 2003 in comparison to \$609,000 in the previous year. The change reflects a higher number of stock options exercised during the current year (121,305 in 2003 verses 57,635 in 2002) at a lower average price (\$12.17 in 2003 verses \$14.60 in 2002).

We maintain a working capital line of credit with our bank. Borrowings under this line bear interest at the bank's base rate (4% at September 28, 2003). The full amount of the \$12.0 million line was available to us at September 28, 2003.

We believe that the combination of existing cash, cash equivalents, and highly liquid short-term investments on hand, future cash to be generated by operations and amounts available under our existing line of credit will be sufficient to meet our ongoing operating and capital expenditure requirements for the foreseeable future.

### ***Off-Balance Sheet Arrangements***

We do not have any material off-balance sheet arrangements other than non-cancelable operating leases entered into in the ordinary course of business. For liquidity purposes, we choose to lease our facilities and automobiles instead of purchasing them.

### ***Contractual Obligations and Other Commercial Commitments***

The following tables set forth certain information concerning our obligations and commitments to make future payments under contracts, such as debt and lease agreements, and under contingent commitments.

<u>Contractual Obligations</u>	<u>Payments Due by Period</u>				
	<u>Total</u>	<u>Less than 1 Year</u>	<u>1 - 3 Years</u>	<u>4 - 5 Years</u>	<u>After 5 Years</u>
			(In \$000s)		
Non-Cancelable Operating Lease Obligations . . .	\$9,323	\$1,445	\$2,683	\$2,203	\$2,992
Purchase Obligations . . . . .	<u>289</u>	<u>289</u>	<u>—</u>	<u>—</u>	<u>—</u>
Total Contractual Obligations . . . . .	<u>\$9,612</u>	<u>\$1,734</u>	<u>\$2,683</u>	<u>\$2,203</u>	<u>\$2,992</u>

### ***Legal and Regulatory Affairs***

On November 25, 2002, we announced the settlement of a lawsuit that Cardiac Science, Inc. initiated against us in March 2002 asserting that we have infringed upon two patents owned by them. The settlement included the cross-licensing of a number of patents. We paid an initial licensing fee and will pay certain ongoing royalties to them. These amounts did not and will not have a material impact on our consolidated financial position and results of operations.

We are also involved in the normal course of our business in various litigation matters and regulatory issues, including product recalls. Although we are unable to quantify at the present time the exact financial impact in any pending matters, we believe that none of the pending matters will have an outcome material to our financial condition or results of operations.

### **2002 Compared to 2001**

Our net sales increased 26% in fiscal 2002 to a record \$150.2 million, up from \$119.2 million in the prior year, reflecting continued growth of our core M Series product, and the successful introduction to the market of our CCT and AED Plus products.

Net sales to the North American hospital market totaled \$50.7 million, a 31% increase in comparison to \$38.6 million for the prior year. The increase was primarily due to our ability to capture market share from our competitors and to a growing acceptance of and desire for more fully featured units which include more monitoring parameters. Our sales to the North American pre-hospital market increased 27%

to \$47.0 million, up from \$36.9 million in the previous year. Increases in this segment were primarily due to our data management software revenues and distributor sales of our new AED Plus product.

Total North American sales increased 25% to \$117.0 million in comparison to \$93.9 million for the same period a year earlier. In addition to the individual factors described above, the following factors have contributed to the overall growth in our North American sales: first, there was an increased demand for our biphasic technology and as a result 96% of all M-Series sold during the 2002 have incorporated our biphasic technology compared with 71% in 2001; second, the introduction of our new AED Plus product generated approximately \$6.6 million in sales in its initial year, of which approximately 79% were sold in North America.

International sales increased 31% to \$33.2 million in comparison to \$25.3 million for the same period a year earlier. The increase in International sales reflected continued growth particularly in continental Europe, the United Kingdom, and Australia. This was the result of continued investments in our international infrastructure, a full year's sales from our direct operations in France and Australia; increased sales through our European distribution partners; and record sales in the United Kingdom, which included large sales to the U.K. government, which was upgrading its EMS systems.

Gross margins for fiscal 2002 increased to 56.5%, from 55.8% in fiscal 2001. The increased margins were due to the introduction of our new CCT product, higher demand for monitoring parameters, and contribution from our data management software products. These increases were partially offset by an increase in international shipments, including sales to distributors, which typically carry lower than average gross margins.

Selling and marketing expenses as a percentage of net sales remained consistent at 32%. Compared to the year ended September 30, 2001, selling and marketing expenses increased \$10.4 million or 27.3% for the year ended September 29, 2002. The increase in selling and marketing expense reflected additions to the North American pre-hospital sales force, expenses related to our newest direct distribution subsidiaries in France and Australia, and higher marketing costs related to increased personnel and related activities in the international markets and supporting the launch of our AED Plus product worldwide.

General and administrative expenses decreased as a percentage of net sales to 7.5% from 8.1%, as we continued to leverage our personnel and maximize our information technology investments. General and administrative expenses increased \$1.6 million or 16.5% for the year ended September 29, 2002, compared to the year ended September 30, 2001. The change from the comparable prior period primarily reflected an increase in insurance premiums and professional fees, which included litigation costs in defense of a patent infringement case.

R&D expenses increased \$1.3 million or 12.8% for the year ended September 29, 2002 compared to the year ended September 30, 2001. R&D expenses decreased as a percentage of net sales to 7.7% from 8.6%. Our continued investment in research and development reflected significant resources devoted to our new public access product, the AED Plus, biphasic clinical trial studies, and increased investments in future product development.

Investment and other income decreased to \$1.6 million in fiscal 2002, as compared to \$3.1 million in the previous year. This decrease was primarily due to declining interest rates, which were slightly offset by the increase in average cash balances over the prior year.

Our effective tax rate decreased from 35% to 33% for the year ended September 29, 2002, as compared to the same period in fiscal 2001, reflecting increased research and development credits stemming from the development of our CCT and AED Plus products.

### **Critical Accounting Policies**

Our management strives to report our financial results in a clear and understandable manner, even though in some cases accounting and disclosure rules are complex and require us to use technical terminology. We follow accounting principles generally accepted in the United States in preparing our

consolidated financial statements. These principles require us to make certain estimates and apply judgments that affect our financial position and results of operations. Management continually reviews its accounting policies, how they are applied and how they are reported and disclosed in our financial statements. Following is a summary of our more significant accounting policies, defined as revenue recognition and those that are reflective of significant judgments and uncertainties, and potentially result in materially different results under different assumptions and conditions, and how they are applied in preparation of the financial statements. For a detailed discussion on the application of these and other accounting policies, see Note A in the notes to the consolidated financial statements.

### ***Revenue Recognition***

Revenues from sales of cardiac resuscitation devices, disposable electrodes and accessories are recognized when a signed non-cancelable purchase order exists, the product is shipped, title and risk have passed to the customer, the fee is fixed and determinable, and collection is considered probable. Revenues are recorded net of estimated returns.

We also license software under non-cancelable license agreements and provide services including training, installation, consulting and maintenance, which consist of product support services, periodic updates and unspecified upgrade rights (collectively, post-contract customer support ("PCS")). Revenue from the sale of software is recognized in accordance with the American Institute of Certified Public Accountants ("AICPA") Statement of Position ("SOP") 97-2, "Software Revenue Recognition," as amended. License fee revenues are recognized when a non-cancelable license agreement has been signed, the software product has been shipped, there are no uncertainties surrounding product acceptance, the fees are fixed and determinable, and collection is considered probable. Revenues from maintenance agreements and upgrade rights are recognized ratably over the period of service.

Our software arrangements contain multiple elements, which include software products, services and PCS. In general, we do not have vendor specific objective evidence of fair value for our software products. Accordingly, for transactions where vendor specific objective evidence exists for undelivered elements but not for delivered elements, we use the residual method as discussed in SOP 98-9, "Modification of SOP 97-2, With Respect to Certain Transactions." Under the residual method, the total fair value of the undelivered elements, as indicated by vendor specific objective evidence, is deferred and the difference between the total arrangement fee and the amount deferred for the undelivered elements is recognized as revenue related to the delivered elements.

### ***Allowance for Doubtful Accounts / Sales Returns and Allowances***

We maintain an allowance for doubtful accounts for estimated losses, which are included in bad debt expense, resulting from the inability of our customers to make required payments. We determine the adequacy of this allowance by regularly reviewing the aging of our accounts receivable and evaluating individual customer receivables, considering customers' financial condition, historical experience, credit history and current economic condition. We also maintain an estimate of potential future product returns and discounts given related to trade-ins and to current period product receivables. We analyze the rate of historical returns when evaluating the adequacy of the allowance for sales returns, which are included with the allowance for doubtful accounts on our balance sheet.

As of September 28, 2003 our accounts receivable balance of \$47.9 million is reported net of allowances of \$4.7 million. We believe our reported allowances at September 28, 2003 are adequate. If the financial conditions of our customers were to deteriorate, however, resulting in their inability to make payments, we may need to record additional allowances, resulting in additional expenses being recorded for the period in which such determination was made.

### ***Warranty Reserves***

Our products are sold with warranty provisions that require us to remedy deficiencies in quality or performance over a specified period of time, usually one to five years. We provide for the estimated cost of

product warranties at the time revenue is recognized. While we engage in product quality programs and processes, our warranty obligation is affected by product failure rates, material usage and service delivery costs incurred in correcting a product failure. We believe that our recorded liability of \$2.1 million at September 28, 2003 is adequate to cover future costs for the servicing of our products sold through that date. If actual product failure rates, material usage or service delivery costs differ from our estimates, revisions to the estimated warranty liability would be required.

### ***Inventory Reserves***

Significant management judgment is required to determine the reserve for obsolete or excess inventory. Inventory on hand may exceed future demand either because the product is outdated, obsolete, or because the amount on hand is in excess of future needs. We provide for the total value of inventories that we determine to be obsolete based on criteria such as customer demand and changing technologies. At September 28, 2003, our inventory reserves were \$2.4 million, or 6.5% of our \$36.8 million gross inventories.

We value our inventories at the lower of cost or market. Cost is determined by the first-in, first-out ("FIFO") method, including material, labor and factory overhead.

### **Safe Harbor Statements**

*Certain statements contained herein constitute "forward-looking statements" as that term is defined under the Private Securities Litigation Reform Act of 1995 (the "Act") and releases issued by the Securities and Exchange Commission and within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Exchange Act of 1934. The words "believe," "expect," "anticipate," "intend," "estimate" and other expressions which are predictions of or indicate future events and trends and which do not relate to historical matters identify forward-looking statements. Particularly, the Company's expectations regarding future operational liquidity, contractual obligations and other commercial commitments, and capital requirements are forward-looking statements. Reliance should not be placed on forward-looking statements because they involve known and unknown risks, uncertainties and other factors, which may cause the actual results, performance or achievements of the Company to differ materially from anticipated future results, performance or achievements expressed or implied by such forward-looking statements. The Company undertakes no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise. Factors that could cause actual results to differ materially from those expressed or implied by such forward-looking statements include, but are not limited to, the length and severity of the current economic slowdown and its impact on capital spending budgets, the potential disruption in the transportation industry on the Company's supply chain and product distribution channels and those other risks and uncertainties contained under the heading "Risk Factors".*

### **Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

We have cash equivalents and marketable securities that primarily consist of money market accounts and fixed rate asset-backed corporate securities. The majority of these investments have maturities within one to five years. We believe that our exposure to interest rate risk is minimal due to the term and type of our investments and that fluctuations in interest rates would not have a material adverse effect on our results of operations.

We have international offices in Canada, United Kingdom, Netherlands, France, Germany, and Australia. These subsidiaries transact business in their functional or local currency. Therefore, we are exposed to foreign currency exchange risks and fluctuations in foreign currencies, along with economic and political instability in the foreign countries in which we operate, all of which could adversely impact our results of operations and financial condition.

We use forward contracts to reduce our exposure to foreign currency risk due to fluctuations in exchange rates underlying the value of intercompany accounts receivable denominated in foreign



**Item 8. Financial Statements and Supplementary Data**

**REPORT OF INDEPENDENT AUDITORS**

**Board of Directors and Stockholders of ZOLL Medical Corporation**

We have audited the accompanying consolidated balance sheets of ZOLL Medical Corporation as of September 28, 2003 and September 29, 2002, and the related consolidated statements of income, stockholders' equity and comprehensive income, and cash flows for each of the three years in the period ended September 28, 2003. Our audits also included the financial statement schedule listed in the Index at Item 15(a). These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of ZOLL Medical Corporation at September 28, 2003 and September 29, 2002, and the consolidated results of its operations and its cash flows for each of the three years in the period ended September 28, 2003, in conformity with accounting principles generally accepted in the United States. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

*Ernst + Young LLP*

October 31, 2003  
Boston, Massachusetts

**ZOLL MEDICAL CORPORATION**  
**CONSOLIDATED BALANCE SHEETS**

	<u>Sept. 28, 2003</u>	<u>Sept. 29, 2002</u>
	(000's omitted, except per share amounts)	
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents .....	\$ 40,780	\$ 55,658
Marketable securities .....	19,992	10,130
Accounts receivable, less allowances of \$4,689 and \$3,462 at September 28, 2003 and September 29, 2002, respectively .....	47,906	42,927
Inventories:		
Raw materials .....	13,662	8,936
Work-in-process .....	4,712	4,610
Finished goods .....	<u>16,014</u>	<u>15,594</u>
	34,388	29,140
Prepaid expenses and other current assets .....	<u>5,042</u>	<u>4,049</u>
Total current assets .....	148,108	141,904
Property and equipment at cost:		
Land and building .....	3,527	3,517
Machinery and equipment .....	34,512	28,543
Construction in progress .....	1,147	1,692
Tooling .....	7,678	7,265
Furniture and fixtures .....	2,173	1,738
Leasehold improvements .....	<u>3,789</u>	<u>1,336</u>
	52,826	44,091
Less accumulated depreciation .....	<u>29,780</u>	<u>24,549</u>
Net property and equipment .....	23,046	19,542
Investments .....	12,804	2,000
Other assets, net of accumulated amortization of \$2,298 and \$1,693 at September 28, 2003 and September 29, 2002, respectively .....	<u>8,138</u>	<u>2,408</u>
	<u>\$192,096</u>	<u>\$165,854</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable .....	\$ 12,204	\$ 10,014
Accrued expenses and other liabilities .....	<u>22,399</u>	<u>12,780</u>
Total current liabilities .....	34,603	22,794
Deferred income taxes .....	1,502	1,148
Commitments and contingencies (Note H)		
Stockholders' equity:		
Preferred stock, \$0.01 par value, authorized 1,000 shares, none issued or outstanding .....		
Common stock, \$0.02 par value, authorized 19,000 shares, 9,063 and 8,942 issued and outstanding at September 28, 2003 and September 29, 2002, respectively .....	181	179
Capital in excess of par value .....	99,714	97,512
Accumulated other comprehensive loss .....	(1,810)	(835)
Retained earnings .....	<u>57,906</u>	<u>45,056</u>
Total stockholders' equity .....	<u>155,991</u>	<u>141,912</u>
	<u>\$192,096</u>	<u>\$165,854</u>

See accompanying notes.

**ZOLL MEDICAL CORPORATION**  
**CONSOLIDATED INCOME STATEMENTS**

	Year Ended		
	Sept. 28, 2003	Sept. 29, 2002	Sept. 30, 2001
	(000's omitted, except per share data)		
Net sales .....	\$184,603	\$150,227	\$119,202
Cost of goods sold.....	<u>81,477</u>	<u>65,274</u>	<u>52,684</u>
Gross profit .....	103,126	84,953	66,518
Expenses:			
Selling and marketing.....	59,461	48,645	38,208
General and administrative .....	12,404	11,193	9,605
Research and development .....	<u>14,115</u>	<u>11,536</u>	<u>10,231</u>
Total expenses .....	<u>85,980</u>	<u>71,374</u>	<u>58,044</u>
Income from operations .....	17,146	13,579	8,474
Investment and other income .....	2,033	1,595	3,140
Interest expense.....	<u>—</u>	<u>—</u>	<u>1</u>
Income before income taxes .....	19,179	15,174	11,613
Provision for income taxes .....	<u>6,329</u>	<u>4,944</u>	<u>4,051</u>
Net income .....	<u>\$ 12,850</u>	<u>\$ 10,230</u>	<u>\$ 7,562</u>
Basic earnings per common share .....	\$ 1.42	\$ 1.15	\$ 0.85
Weighted average common shares outstanding .....	<u>9,030</u>	<u>8,919</u>	<u>8,847</u>
Diluted earnings per common and common equivalent share .....	\$ 1.40	\$ 1.12	\$ 0.83
Weighted average common and common equivalent shares outstanding .....	<u>9,204</u>	<u>9,158</u>	<u>9,097</u>

See accompanying notes.

ZOLL MEDICAL CORPORATION

STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE INCOME

	Common Shares	Amount	Capital in Excess of Par Value	Accumulated Comprehensive Income	Retained Earnings	Total Stockholders' Equity
	(000's omitted)					
Balance at September 30, 2000 . . . . .	8,798	\$176	\$94,799	\$ 177	\$27,264	\$122,416
Exercise of stock options . . . . .	86	2	798			800
Tax benefit realized upon exercise of stock options . . . . .			817			817
Comprehensive income:						
Net income . . . . .					7,562	7,562
Unrealized gain on available-for-sale securities . . . . .				6		6
Cumulative foreign currency translation adjustment . . . . .				(164)		(164)
Total comprehensive income . . . . .						7,404
Balance at September 30, 2001 . . . . .	8,884	178	96,414	19	34,826	131,437
Exercise of stock options . . . . .	58	1	608			609
Tax benefit realized upon exercise of stock options . . . . .			490			490
Comprehensive income:						
Net income . . . . .					10,230	10,230
Unrealized loss on available-for-sale securities . . . . .				(151)		(151)
Cumulative foreign currency translation adjustment . . . . .				(703)		(703)
Total comprehensive income . . . . .						9,376
Balance at September 29, 2002 . . . . .	8,942	179	97,512	(835)	45,056	141,912
Exercise of stock options . . . . .	121	2	1,155			1,157
Tax benefit realized upon exercise of stock options . . . . .			1,047			1,047
Comprehensive income:						
Net income . . . . .					12,850	12,850
Unrealized loss on available-for-sale securities . . . . .				(43)		(43)
Cumulative foreign currency translation adjustment . . . . .				(932)		(932)
Total comprehensive income . . . . .						11,875
Balance at September 28, 2003 . . . . .	<u>9,063</u>	<u>\$181</u>	<u>\$99,714</u>	<u>\$(1,810)</u>	<u>\$57,906</u>	<u>\$155,991</u>

See accompanying notes.

**ZOLL MEDICAL CORPORATION**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	Year Ended		
	Sept. 28, 2003	Sept. 29, 2002	Sept. 30, 2001
		(000's omitted)	
<b>Operating Activities:</b>			
Net income .....	\$ 12,850	\$ 10,230	\$ 7,562
Charges not affecting cash:			
Depreciation and amortization .....	7,881	6,758	6,258
Tax benefit from the exercise of stock options .....	1,047	490	817
Accounts receivable allowances .....	1,227	682	885
Inventory reserve .....	453	341	833
Net realized gains on sale of marketable securities .....	(95)	(227)	(431)
Provision for warranty expense .....	961	665	123
Deferred income taxes .....	(751)	128	(46)
Changes in current assets and liabilities:			
Accounts receivable .....	(5,148)	(6,051)	(871)
Inventories .....	(6,853)	(9,113)	(1,239)
Prepaid expenses and other current assets .....	(686)	(583)	417
Accounts payable and accrued expenses .....	<u>9,089</u>	<u>8,549</u>	<u>(2,186)</u>
<b>Net cash provided by operating activities .....</b>	<b>19,975</b>	<b>11,869</b>	<b>12,122</b>
<b>Investing Activities:</b>			
Additions to property and equipment, net .....	(10,879)	(8,321)	(7,246)
Purchases of marketable securities .....	(25,382)	(17,653)	(19,106)
Proceeds from sales and maturities of marketable securities .....	15,390	23,458	55,196
Equity investments in private companies .....	(10,804)	—	—
Issuance of note receivable to Revivant Corp. ....	(5,000)	—	—
Other assets, net .....	<u>65</u>	<u>311</u>	<u>(238)</u>
<b>Net cash provided by (used in) investing activities .....</b>	<b>(36,610)</b>	<b>(2,205)</b>	<b>28,606</b>
<b>Financing Activities:</b>			
Exercise of stock options .....	1,157	609	800
Repayment of long-term debt .....	<u>—</u>	<u>—</u>	<u>(20)</u>
<b>Net cash provided by financing activities .....</b>	<b>1,157</b>	<b>609</b>	<b>780</b>
<b>Effect of exchange rates on cash and cash equivalents .....</b>	<b><u>600</u></b>	<b><u>82</u></b>	<b><u>(230)</u></b>
<b>Net (decrease) increase in cash .....</b>	<b>(14,878)</b>	<b>10,355</b>	<b>41,278</b>
<b>Cash and cash equivalents at beginning of year .....</b>	<b><u>55,658</u></b>	<b><u>45,303</u></b>	<b><u>4,025</u></b>
<b>Cash and cash equivalents at end of year .....</b>	<b><u>\$ 40,780</u></b>	<b><u>\$ 55,658</u></b>	<b><u>\$ 45,303</u></b>
<b>Supplemental disclosures of cash flow information:</b>			
Cash paid during the year:			
Income taxes .....	\$ 5,026	\$ 3,816	\$ 2,519
Interest .....	—	—	1

See accompanying notes.

**ZOLL MEDICAL CORPORATION**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note A — Significant Accounting Policies**

*Description of Business:* ZOLL Medical Corporation (“the Company”) designs, manufactures and markets an integrated line of proprietary, non-invasive cardiac resuscitation devices, disposable electrodes and accessories used for the emergency resuscitation of cardiac arrest victims. The Company’s subsidiary, Pinpoint Technologies (“Pinpoint”) designs and markets software, which automates collection and management of both clinical and non-clinical data for emergency medical service providers.

*Principles of Consolidation:* The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All significant intercompany accounts and transactions have been eliminated.

*Reclassifications:* Certain reclassifications have been made to prior years’ consolidated financial statements to conform to the 2003 presentation.

*Cash and Cash Equivalents:* The Company considers all highly liquid instruments with an original maturity of three months or less to be cash equivalents. Substantially all cash and cash equivalents are invested in a money market investment account. These amounts are stated at cost, which approximates market value.

*Marketable Securities:* The Company accounts for marketable securities in accordance with Statement of Financial Accounting Standards No. 115 “Accounting for Certain Investments in Debt and Equity Securities” (“SFAS 115”). SFAS 115 establishes the accounting and reporting requirements for all debt securities and for investments in equity securities that have readily determinable fair values. All marketable securities must be classified as one of the following: held-to-maturity, available-for-sale, or trading. The Company classifies its marketable securities as available-for-sale and, as such, carries the investments at fair value, with unrealized holding gains and losses reported in stockholders’ equity as a separate component of accumulated other comprehensive income. The cost of securities sold is based on the specific identification method. Realized gains and losses, and declines in value judged to be other than temporary, are included in investment income.

*Concentration of Risk:* The Company sells its products primarily to hospitals, emergency care providers and universities. Collateral is generally not required. With the introduction of the AED Plus product, the Company has established distribution agreements with approximately 150 distributors to distribute this product. The Company performs periodic credit evaluations of its customers’ financial condition and does not require collateral. No single customer accounts for a significant portion of the Company’s net sales or accounts receivable.

In addition, the Company sells its products to the international market to both end users and distributors. Although the Company does not foresee a credit risk associated with international receivables to either end users or distributors, repayment is dependent upon the financial stability of the customers to which it sells. In order to mitigate the risk of loss in geographical areas with historical credit risks, in some cases the Company requires letters of credit from its foreign customers. Foreign sales accounted for approximately 26% of the Company’s total revenues in 2003, 2002, and 2001. The percent of foreign sales to distributors were approximately 49% in 2003, 48% in 2002, and 59% in 2001. No single distributor accounts for a significant portion of the Company’s international sales or accounts receivables.

The Company maintains reserves for potential trade receivable credit losses, and such losses historically have been within management’s expectations.

*Financial Instruments:* The fair value of the Company’s financial instruments, which include cash and cash equivalents, marketable securities, accounts receivable, and accounts payable, are based on assumptions concerning the amount and timing of estimated future cash flows and assumed discount rates reflecting varying degrees of perceived risk. The carrying value of these financial instruments approximated

## ZOLL MEDICAL CORPORATION

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

their fair value at September 28, 2003 and September 29, 2002, respectively, due to the short-term nature of these instruments.

The Company utilizes foreign currency forward contracts to reduce our exposure to foreign currency risk due to fluctuations in exchange rates underlying the value of intercompany accounts receivable denominated in foreign currencies. The Company recognizes all derivative financial instruments (foreign currency forward contracts) in accordance with SFAS 133 "Accounting for Derivative Instruments and Hedging Activities". Changes in the fair value of derivative instruments are recorded in earnings unless hedge accounting criteria are met. For derivative instruments designated as fair value hedges, the changes in fair value of both the derivative instrument and the hedged item are recorded in earnings. For derivative instruments designated as cash flow and net investment hedges, the effective portions of changes in the fair value of the derivative are recorded in other comprehensive income ("OCI"). The ineffective portions are recognized in earnings.

*Inventories:* Inventories, principally purchased parts, are valued at the lower of first-in, first-out ("FIFO") cost or market. Market is determined by the replacement value for raw materials and net realizable value, after allowance for estimated costs of completion and disposal, for work-in-process and finished goods. We provide for the total value of inventories that we determine to be obsolete based on criteria such as customer demand and changing technologies. At September 28, 2003, and September 29, 2002, our inventory reserves were \$2.4 million, or 6.5% of our \$36.8 million gross inventories, and \$1.9 million, or 6.1% of our \$31.0 million gross inventories, respectively.

*Intangible Assets:* Patents are stated at cost and amortized using the straight-line method over five years. Prepaid license fees are amortized over the term of the related contract, once commercialization of the related product begins. The carrying value of goodwill and other intangible assets was approximately \$1.3 million and \$1.1 million at September 28, 2003 and September 29, 2002.

*Property and Equipment:* Property and equipment are stated at cost. In general, depreciation is computed on a straight-line basis over the estimated economic useful lives of the assets (forty years for buildings, three to ten years for machinery and equipment and five years for tooling, furniture, fixtures, and software). Leasehold improvements are amortized over the shorter of the useful life or the life of the related lease. Depreciation expense totaled \$7,570,000, \$6,485,000 and \$5,957,000 in 2003, 2002, and 2001, respectively.

*Long-lived Assets:* The Company reviews long-lived assets at least annually to determine if any adverse conditions exist that would indicate impairment. Conditions that would trigger an impairment assessment include, but are not limited to, a significant adverse change in legal factors or business climate that could affect the value of an asset or an adverse action or assessment by a regulator. If the carrying amount of an asset exceeds the sum of its undiscounted cash flows, the carrying value is written down to fair value in the period identified. Fair value is calculated as the present value of estimated future cash flows using a risk-adjusted discount rate.

*Investments:* Investments in those entities where the Company owns less than twenty percent of the voting stock of the individual entity and does not exercise significant influence over operating and financial policies of the entity are accounted for using the cost method. As of September 28, 2003 and September 29, 2002, the Company's investments were in companies that are not publicly traded, and, therefore, no established market for their securities exists. The Company has a policy in place to review the fair value of its investments on a regular basis to evaluate the carrying value of the investments in these companies. If the Company believes that the carrying value of an investment is in excess of fair market value, it is the Company's policy to record an impairment charge to adjust the carrying value to fair market value.

**ZOLL MEDICAL CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

As of September 28, 2003 and September 29, 2002, the Company had investments of \$12.8 million and \$2.0 million, respectively.

*Revenue Recognition:* Revenues from sales of cardiac resuscitation devices, disposable electrodes and accessories are recognized when a signed non-cancelable purchase order exists, the product is shipped, title and risk of loss have passed to the customer, the fee is fixed or determinable, and collection is considered probable. Revenues are recorded net of estimated returns.

The Company also licenses software under non-cancelable license agreements and provides services including training, installation, consulting and maintenance, consisting of product support services, periodic updates and unspecified upgrade rights (collectively, "PCS"). Revenue from the sale of software is recognized in accordance with the American Institute of Certified Public Accountants ("AICPA") Statement of Position ("SOP") 97-2, "Software Revenue Recognition," as amended. License fee revenues are generally recognized when a non-cancelable license agreement has been signed, the software product has been shipped, there are no uncertainties surrounding product acceptance, the fees are fixed or determinable, and collection is considered probable. Revenues from training, installation and consulting services are recognized as the services are provided. Revenues from maintenance agreements and upgrade rights are recognized ratably over the period of service.

The Company's software arrangements contain multiple elements, which include software products, services and PCS. In general, the Company does not have vendor specific objective evidence of fair value for its software products. Accordingly, for transactions where vendor specific objective evidence exists for undelivered elements but not for delivered elements, the Company uses the residual method as discussed in SOP 98-9, "Modification of SOP 97-2, With Respect to Certain Transactions." Under the residual method, the total fair value of the undelivered elements, as indicated by vendor specific objective evidence, is deferred and the difference between the total arrangement fee and the amount deferred for the undelivered elements is recognized as revenue related to the delivered elements.

*Advertising Costs:* Advertising costs are expensed as incurred and totaled \$1,805,000, \$1,457,000, and \$993,000 in 2003, 2002, and 2001 respectively.

*Shipping & Handling Costs:* Shipping and handling costs are recorded in Costs of Goods Sold and totaled \$2,675,000, \$2,216,000, and \$1,886,000 in 2003, 2002, and 2001, respectively.

*Product Warranty:* Expected future product warranty costs, included in accrued expenses and other liabilities, are recognized at the time of sale for all products covered under warranty. Warranty periods range from one to five years. The Company's estimate is based upon the number of units remaining under warranty and the historical per unit repair costs and return rates.

Product warranty activity for the twelve months ended September 28, 2003 is as follows:

(000's omitted)

<u>Balance at September 29, 2002</u>	<u>Accruals for Warranties Issued During the Period</u>	<u>Decrease to Preexisting Warranties</u>	<u>Balance at September 28, 2003</u>
\$1,723	\$961	\$575	\$2,109

*Foreign Currency:* During 2002, the Company changed the functional currency for the majority of its foreign subsidiaries from the U.S. Dollar to the local currency. This change stems from a majority of the foreign subsidiary cash flows now being denominated in the local currency. The functional currency for each of the Company's subsidiaries is each country's local currency. All assets and liabilities are translated into U.S. dollar equivalents at the exchange rate in effect on the balance sheet date. Revenues and expenses are translated at the average exchange rates for the year. Translation gains or losses are recorded in consolidated stockholders' equity as an element of accumulated other comprehensive income. Foreign

**ZOLL MEDICAL CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

currency gain/(loss) recorded as other income in the consolidated income statement totaled \$932,000, (\$171,000), and \$11,000 in 2003, 2002, and 2001, respectively.

*Stock-Based Compensation:* In December 2002, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standard (SFAS) No. 148, "Accounting for Stock-Based Compensation — Transition and Disclosure — an amendment of SFAS No. 123", which provides optional transition guidance for those companies electing to voluntarily adopt the accounting provisions of SFAS No. 123. In addition, SFAS No. 148 amends the disclosure requirements of SFAS No. 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based employee compensation and the effect of the method used on reported results. As permitted by Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation" ("SFAS 123"), the Company measures compensation expense for its stock-based compensation plans using the intrinsic method prescribed by Accounting Principles Board No. 25, "Accounting for Stock Issued to Employees." In accordance with SFAS 123, the Company has provided the pro forma disclosures of the effect on net income and earnings per share as if SFAS 123 had been applied in measuring compensation expense for all periods presented.

No stock-based employee compensation cost is reflected in net income, as all options granted under those plans had an exercise price equal to the market value of the underlying common stock on the grant date. The following table illustrates the effect on net income and earnings per share if the Company had applied the fair value recognition provisions of Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation", to the stock-based employee compensation. The estimated fair value of each option is calculated using the Black-Scholes option-pricing model:

	2003	2002	2001
	(000's omitted, except per share data)		
Net income — as reported .....	\$12,850	\$10,230	\$ 7,562
Deduct: Total stock-based employee compensation expense determined under fair value based methods for all awards, net of related tax effects .....	<u>(2,938)</u>	<u>(2,434)</u>	<u>(1,722)</u>
Net income-pro forma .....	<u>\$ 9,912</u>	<u>\$ 7,796</u>	<u>\$ 5,840</u>
Earnings per share:			
Basic — as reported .....	<u>\$ 1.42</u>	<u>\$ 1.15</u>	<u>\$ 0.85</u>
Basic — pro forma .....	<u>\$ 1.10</u>	<u>\$ 0.87</u>	<u>\$ 0.66</u>
Diluted — as reported .....	<u>\$ 1.40</u>	<u>\$ 1.12</u>	<u>\$ 0.83</u>
Diluted — pro forma .....	<u>\$ 1.08</u>	<u>\$ 0.85</u>	<u>\$ 0.64</u>

The above pro forma amounts may not be representative of the effects on reported net income for future years. The fair value of each option grant is estimated on the date of the grant using the Black-Scholes option-pricing model with the following weighted-average assumptions used for grants in 2003, 2002 and 2001:

	2003	2002	2001
Dividend yield .....	0%	0%	0%
Expected volatility .....	71.8%	74.1%	64.3%
Risk-free interest rate .....	3.69%	4.19%	5.13%
Expected lives .....	5 years	5 years	5 years

**ZOLL MEDICAL CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

*Earnings per Share:* Basic earnings per share are calculated based upon the weighted average shares of common stock outstanding during the period. Diluted earnings per share is calculated based upon the weighted average shares of common stock outstanding, plus the dilutive effect of stock options, calculated using the treasury stock method. The shares used for basic earnings per common share and diluted earnings per common share are reconciled as follows:

	<u>2003</u>	<u>2002</u>	<u>2001</u>
	(000's omitted)		
Average shares outstanding for basic earnings per share .....	9,030	8,919	8,847
Dilutive effect of stock options .....	<u>174</u>	<u>239</u>	<u>250</u>
Average shares outstanding for diluted earnings per share .....	<u>9,204</u>	<u>9,158</u>	<u>9,097</u>

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

*Comprehensive Income:* The Company computes comprehensive income in accordance with Statement of Financial Accounting Standards No. 130 "Reporting Comprehensive Income" ("SFAS 130"). SFAS 130 establishes standards for the reporting and display of comprehensive income and its components in the financial statements. Other comprehensive income, as defined, includes all changes in equity during a period from non-owner sources, such as unrealized gains and losses on available-for-sale securities and the effect of foreign currency translation. Accumulated balances for each element of other comprehensive loss were as follows:

	<u>2003</u>	<u>2002</u>
	(000's omitted)	
Unrealized gain (loss) on available-for-sales securities .....	\$ (11)	\$ 32
Cumulative foreign currency translation .....	<u>(1,799)</u>	<u>(867)</u>
Accumulated other comprehensive loss .....	<u>\$(1,810)</u>	<u>\$(835)</u>

*Recent Accounting Pronouncements:* In December 2002, the FASB issued Interpretation No. 45 ("FIN 45"), "Guarantor's Accounting and Disclosure Requirements", which requires the disclosure of any guarantees in place prior to December 31, 2002 and the recognition of a liability for the fair value of any guarantees entered into or modified after that date. The adoption of FIN 45 had no impact on the Company's financial position or results of operations. Disclosure requirements of FIN 45 are included in Note A to the Company's consolidated financial statements.

In January 2003, the FASB issued Interpretation No. 46 ("FIN 46"), "Consolidation of Variable Interest Entities", to clarify the conditions under which the assets, liabilities and activities of another entity should be consolidated into the financial statements of a company. FIN 46 requires the consolidation of a variable interest entity by a company that bears the majority of the risk of loss from the variable interest entity's (VIE) activities or is entitled to receive the majority of the variable interest entity's residual returns. In October 2003, the FASB released for public comment a proposed exposure draft clarifying certain aspects of FIN 46 and providing certain entities with exemptions from the requirements of FIN 46. If approved, the exposure draft would apply to financial statements for the first period ending after December 15, 2003. The provisions of FIN 46 are required to be adopted by the Company for interests in VIEs held by the Company prior to February 1, 2003 in the first quarter of fiscal 2004 and immediately for any new interests in VIEs acquired after February 1, 2003. The Company holds equity investments in Revivant Corporation, LifeCOR, Inc., Advanced Circulatory Systems, Inc. (formerly

## ZOLL MEDICAL CORPORATION

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

ResQSystems, Inc.) and AED@Home with a total carrying value of approximately \$12.8 million. Our fourth quarter fiscal 2003 investment in Revivant Corporation does not represent an interest in a VIE. The Company is currently evaluating whether the other investments qualify as VIEs.

In April 2003, the FASB issued SFAS No. 149, "Amendment of Statement 133 on Derivative Instruments and Hedging Activities", which is effective for contracts entered into or modified after June 30, 2003 and for hedging relationships designated after June 30, 2003. SFAS No. 149 amends and clarifies the accounting for derivative instruments and hedging activities under SFAS No. 133 "Accounting for Derivative Instruments and Hedging Activities", as amended by SFAS No. 137 and SFAS No. 138. We have evaluated SFAS No. 149 and determined that it did not have an impact on our Company's consolidated financial statements.

In May 2003, the FASB issued SFAS No. 150, "Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity." SFAS No. 150 changes the accounting for certain financial instruments that, under previous guidance, could be classified as equity or "mezzanine" equity, by now requiring those instruments to be classified as liabilities (or assets in some circumstances) in the statement of financial position. Further, SFAS No. 150 requires disclosure regarding the terms of those instruments and settlement alternatives. The guidance in SFAS 150 generally is effective for all financial instruments entered into or modified after May 31, 2003, and is otherwise effective at the beginning of the first interim period beginning after June 15, 2003. We have evaluated SFAS No. 150 and determined that it does not have an impact on our Company's consolidated financial statements.

In November 2002, the Emerging Issues Task Force ("EITF") reached a consensus on Issue No. 00-21, "Revenue Arrangements with Multiple Deliverables." EITF Issue No. 00-21 provides guidance on how to account for arrangements that involve the delivery or performance of multiple products, services and/or rights to use assets. The provisions of EITF Issue No. 00-21 apply to revenue arrangements entered into in fiscal periods beginning after June 15, 2003, including interim periods. The adoption of EITF Issue No. 00-21 has had no material impact on our Company's consolidated financial statements.

#### **Note B — Marketable Securities**

Investments in marketable securities and debt securities are classified as available-for-sale at September 28, 2003. Available-for-sale securities consist of corporate obligations of \$20.0 million and \$10.1 million as of September 28, 2003 and September 29, 2002, respectively.

The securities are carried at fair value, with unrealized gains and losses reported in stockholders' equity as a separate component of accumulated other comprehensive income. At September 28, 2003 and September 29, 2002, the investment portfolio had gross unrealized gains (losses) of (\$11,000) and \$32,000, respectively. Net loss reclassified from accumulated other comprehensive income to earnings during 2003 totaled \$27,000. The Company recognized realized gains of \$127,000 and losses of \$32,000 on sales of available-for-sale securities in 2003. The dollar value of investments maturing within one year is \$2.1 million, between one and five years is \$16.3 million, and between six and ten years is \$1.6 million.

#### **Note C — Investments**

The Company holds an investment in the common stock of LifeCOR, Inc. ("LifeCOR"), a private medical device corporation. In November 2002, the Company invested an additional \$1.5 million in the common stock of LifeCOR, and entered into an agreement to distribute LifeCOR's products in the North American Hospital market, and also entered into a patent cross-licensing agreement. The Chairman of LifeCOR is also a director of the Company. The total investment in LifeCOR, Inc. as of September 28, 2003 totaled \$3.5 million and represented approximately 5% of LifeCOR's outstanding common stock as of September 28, 2003.

**ZOLL MEDICAL CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

In January 2003, the Company invested \$1.3 million in the common stock of Advanced Circulatory Systems, Inc. (formerly ResQSystems, Inc.), a development stage medical device corporation. The Company's investment in Advanced Circulatory Systems, Inc. ("ACSI") represented approximately 8% of ACSI's outstanding common stock as of September 28, 2003.

In August 2003, the Company invested a total of \$12 million in Revivant Corporation ("Revivant"), a private medical device corporation. Of the \$12 million invested, \$7 million was invested in the preferred stock of Revivant and \$5 million represented debt financing ("Note"). The Company's ownership percentage in Revivant approximates 15% with an option to acquire the remaining outstanding shares of Revivant at any time through October 4, 2004. The terms of the Note require quarterly interest payments with an interest rate of 10% per year maturing on June 30, 2007.

The Company accounts for these investments at cost, which approximates market.

**Note D — Prepaid Expenses and Other Current Assets**

Prepaid expenses and other current assets consist of:

	Sept. 28, 2002	Sept. 29, 2003
	(000's omitted)	
Deferred income taxes — Note G .....	\$3,151	\$2,046
Other .....	1,891	2,003
Total prepaid expenses and other current assets .....	\$5,042	\$4,049

**Note E — Accrued Expenses and Other Liabilities**

Accrued expenses and other liabilities consist of:

	Sept. 29, 2002	Sept. 28, 2003
	(000's omitted)	
Accrued salaries and wages and related expenses .....	\$ 7,477	\$ 5,193
Accrued warranty expense .....	2,109	1,723
Deferred revenue .....	1,864	2,180
Deferred lease incentives .....	2,789	—
Other accrued expenses .....	8,160	3,684
Total accrued expenses and other liabilities .....	\$22,399	\$12,780

**Note F — Indebtedness**

The Company maintains an unsecured, uncommitted working capital line of credit with its bank. This line of credit bears interest at the bank's base rate (4.00% at September 28, 2003). The full amount of the line (\$12.0 million) was available to the Company at September 28, 2003.

**ZOLL MEDICAL CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note G — Income Taxes**

The provision for income taxes consists of the following:

	<u>2003</u>	<u>2002</u>	<u>2001</u>
	(000's omitted)		
<b>Federal:</b>			
Current .....	\$4,435	\$3,717	\$3,308
Deferred .....	<u>(595)</u>	<u>(15)</u>	<u>(42)</u>
	3,840	3,702	3,266
<b>State:</b>			
Current .....	909	680	428
Deferred .....	<u>(77)</u>	<u>(113)</u>	<u>(4)</u>
	832	567	424
<b>Foreign:</b>			
Current .....	1,657	675	361
Deferred .....	<u>—</u>	<u>—</u>	<u>—</u>
	<u>1,657</u>	<u>675</u>	<u>361</u>
	<u>\$6,329</u>	<u>\$4,944</u>	<u>\$4,051</u>

The following table allocates income before taxes between domestic and foreign jurisdictions:

	<u>2003</u>	<u>2002</u>	<u>2001</u>
	(000's omitted)		
Domestic .....	\$13,557	\$13,965	\$11,337
Foreign .....	<u>5,622</u>	<u>1,209</u>	<u>276</u>
	<u>\$19,179</u>	<u>\$15,174</u>	<u>\$11,613</u>

The income tax provision differed from the statutory federal income tax provision as follows:

	<u>2003</u>	<u>2002</u>	<u>2001</u>
	(000's omitted)		
Statutory income taxes .....	\$6,713	\$5,327	\$4,050
Tax credits, federal and state .....	(533)	(606)	(330)
State income taxes, net of federal benefit .....	541	369	301
Unbenefited foreign loss .....	(125)	155	206
Foreign income taxes at different rates .....	(109)	—	—
Permanent differences .....	32	19	(24)
Other .....	<u>(190)</u>	<u>(320)</u>	<u>(152)</u>
	<u>\$6,329</u>	<u>\$4,944</u>	<u>\$4,051</u>

**ZOLL MEDICAL CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets and liabilities are as follows:

	<u>Sept. 28, 2003</u>	<u>Sept. 29, 2002</u>
	(000's omitted)	
Deferred tax assets:		
Accounts receivable and inventory .....	\$1,378	\$1,080
Product warranty accruals .....	1,004	785
Purchased research and development .....	199	221
Other liabilities .....	<u>1,451</u>	<u>566</u>
Total deferred tax assets .....	4,032	2,652
Deferred tax liabilities:		
Accelerated tax depreciation .....	2,063	1,539
Prepaid expenses .....	<u>320</u>	<u>215</u>
Total deferred tax liabilities .....	<u>2,383</u>	<u>1,754</u>
Net deferred tax asset .....	<u>\$1,649</u>	<u>\$ 898</u>

**Note H — Commitments and Contingencies**

In the course of normal operations, the Company is involved in litigation arising from commercial disputes, claims from former employees and product liability claims, none of which management believes will have a material effect on the Company's consolidated financial position or results of operations.

On November 25, 2002, the Company announced a settlement of a patent infringement lawsuit initiated in March 2002 by Cardiac Science, Inc. The settlement includes the cross-licensing of a number of patents between the Company and Cardiac Science, Inc. The Company paid an initial licensing fee and will pay certain ongoing royalties to Cardiac Science, Inc. These amounts did not and will not have a material impact on our consolidated financial position and results of operations.

The Company leases certain office and manufacturing space under operating leases. The Company's office leases are subject to adjustments based on actual floor space occupied. The leases also require payment of real estate taxes and operating costs. In addition to the office leases, the Company leases automobiles for business use by a portion of the sales force. Listed below are the future minimum rental payments required under operating leases with non-cancelable terms in excess of one year at September 28, 2003.

	(000's omitted)
2004 .....	\$1,445
2005 .....	1,405
2006 .....	1,278
2007 .....	1,115
2008 .....	1,088
Thereafter .....	<u>2,992</u>
	<u>\$9,323</u>

Total rental expense under operating leases was approximately \$1,467,000, \$1,372,000, and \$1,252,000 in 2003, 2002, and 2001, respectively.

**ZOLL MEDICAL CORPORATION**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

**Note I — Hedging Activities**

The Company operates globally, and its earnings and cash flow are exposed to market risk from changes in currency exchange rates. The Company addresses these risks through a risk management program that includes the use of derivative financial instruments. The program is operated pursuant to documented corporate risk management policies. The Company does not enter into any derivative transaction for speculative purposes.

The Company uses foreign currency forward contracts to manage its currency transaction exposures. These currency forward contracts are not designated as cash flow, fair value or net investment hedges under SFAS 133 and therefore, are marked-to-market with changes in fair value recorded to earnings. These derivative instruments do not subject the Company's earnings or cash flows to material risk since gains and losses on those derivatives offset losses and gains on the assets and liabilities being hedged. These derivative instruments are entered into for periods consistent with the currency transaction exposures, generally three months.

The Company had one foreign currency forward contract outstanding in the notional amount of approximately 4.0 million Euros at September 28, 2003. The contract serves as a hedge of a substantial portion of our Euro-denominated intercompany balances. The fair value of the Euro derivative foreign currency forward contract outstanding at September 28, 2003 was approximately \$4.6 million.

Net recognized losses from foreign currency forward contracts totaled \$357,000 during 2003 and are included in "investment and other income" in the consolidated statement of income. We did not enter into any derivative contracts in fiscal 2002 or 2001.

**Note J — Stockholder's Equity**

*Preferred Stock:* On June 8, 1998, the Company's Board of Directors adopted a Shareholder Rights Plan. In connection with the Shareholder Rights Plan, the Board of Directors declared a dividend distribution of one Preferred Stock purchase right for each outstanding share of Common Stock to stockholders of record as of the close of business day on June 9, 1998. Initially, these rights are not exercisable and trade with the shares of ZOLL's Common Stock. Under the Shareholder Rights Plan, the rights generally become exercisable if a person becomes an "acquiring person" by acquiring 15% or more of the Common Stock of ZOLL, if a person who owns 10% or more of the Common Stock of ZOLL is determined to be an "adverse person" by the Board of Directors or if a person commences a tender offer that would result in that person owning 15% or more of the Common Stock of ZOLL. Under the Shareholder Rights Plan, a shareholder of ZOLL who beneficially owns 15% or more of the Company's Common Stock as of June 9, 1998 generally will be deemed an "acquiring person" if such shareholder acquires additional shares of the Company's Common Stock. In the event that a person becomes an "acquiring person" or is declared an "adverse person" by the Board, each holder of a right (other than the acquiring person or the adverse person) would be entitled to acquire such number of shares of Preferred Stock which are equivalent to ZOLL Common Stock having a value of twice the then-current exercise price of the right. If ZOLL is acquired in a merger or other business combination transaction after any such event, each holder of a right would then be entitled to purchase, at the then-current exercise price, shares of the acquiring company's Common Stock having a value twice the exercise price of the right. The Board of Directors is authorized to fix the designations, relative rights, preferences and limitations on the Preferred Stock at the time of issuance.

*Stock Option Plans:* The Company's 1983, 1992 and 2001 stock option plans provide for the granting of options to officers and other key employees to purchase the Company's Common Stock at a purchase price, in the case of incentive stock options, at least equal to the fair market value per share of the outstanding Common Stock of the Company at the time the option is granted, as determined by the

**ZOLL MEDICAL CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

Compensation Committee of the Board of Directors. Options are no longer granted under the 1983 and 1992 plans. The options become exercisable ratably over two or four years and have maximum life of 10 years. The Company's Non-employee Director Stock Option Plan provides for the granting of options to purchase shares of Common Stock to Directors of the Company who are not also employees of the Company or any of its subsidiaries. The Non-employee Director options vest in equal annual installments over a four year period. The Non-employee Director options may be exercised at a price equal to the fair market value of the Common Stock on the date the option is granted.

The number of shares authorized for these plans was 2,980,000, of which 127,000 remain available for grant at September 28, 2003. Approximately 1,416,000 shares of Common Stock are reserved for future issuance under the Company's stock option plans as of September 28, 2003.

Activity as to stock options under all of the plans is as follows:

	2003		2002		2001	
	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
	(000's omitted, except per share data)					
Outstanding at the beginning of the year .....	1,144	\$31.91	996	\$22.65	833	\$19.94
Granted .....	303	34.35	228	35.17	289	28.40
Exercised .....	(121)	12.17	(58)	14.60	(86)	9.08
Cancelled .....	(37)	33.96	(22)	32.29	(40)	16.53
Outstanding at the end of the year	<u>1,289</u>	<u>\$32.75</u>	<u>1,144</u>	<u>\$31.91</u>	<u>996</u>	<u>\$22.65</u>
Available for grant at the end of the year .....	127		388		191	
Weighted-average fair value of options exercisable at the end of the year .....		\$21.14		\$22.05		\$16.66
Weighted-average exercise price of options exercisable at the end of the year .....		\$31.06		\$29.75		\$13.47

**ZOLL MEDICAL CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

The following table summarizes information about stock options outstanding and exercisable at September 28, 2003.

<u>Range of Exercise Price</u>	<u>Options Outstanding</u>			<u>Options Exercisable</u>	
	<u>Number Outstanding</u>	<u>Weighted-Average Remaining Contractual Life</u> (000's omitted, except per share data)	<u>Weighted-Average Exercise Price</u>	<u>Number Exercisable</u>	<u>Weighted-Average Exercise Price</u>
\$0.02 .....	1*	6.04 years	\$ 0.02	1	\$ 0.02
\$6.57-\$8.75 .....	143	4.20 years	\$ 7.41	143	\$ 7.41
\$9.56-\$12.31 .....	55	5.52 years	\$10.99	55	\$10.99
\$20.25-\$25.88 .....	299	6.79 years	\$24.44	181	\$24.86
\$29.08-\$33.76 .....	210	8.53 years	\$31.90	58	\$31.85
\$33.94-\$39.92 .....	501	8.29 years	\$36.34	129	\$37.68
\$40.13-\$42.94 .....	35	7.26 years	\$41.58	17	\$41.58
\$43.13-\$51.25 .....	45	6.79 years	\$46.15	34	\$46.15
	1,289			618	

\* represents options granted to a subsidiary's employee prior to its acquisition by the Company.

**Note K — Employee Benefit Plan**

*Defined contribution retirement plan:* ZOLL has a defined contribution retirement plan (the "Plan") which contains a "401(k)" program for all employees with three months of service who have attained 21 years of age. Participants in the Plan may contribute up to 15% of their eligible compensation. The Company may make discretionary matching contributions to the Plan in an amount determined by its Board of Directors. The employer match is currently set at 25% of the employee contribution up to 7% of eligible compensation. The Company recorded expense of approximately \$424,000, \$293,000, and \$159,000 in 2003, 2002, and 2001, respectively.

*401(k) Salary Deferral Plan:* Beginning in 1998, Pinpoint has maintained a retirement savings plan (the "Pinpoint Plan") pursuant to which eligible employees may defer compensation for income tax purposes under section 401(k) of the Internal Revenue code of 1986. Participants in the Pinpoint Plan may contribute up to 15% of their eligible compensation, which contributions are matched by the Company at 50% of the employee contribution up to 6% of eligible compensation. The Company may make discretionary matching contributions to the Pinpoint Plan in an amount determined by its Board of Directors. The Company recorded expense related to the Pinpoint Plan of approximately \$100,000, \$73,000, and \$57,000 in 2003, 2002, and 2001, respectively.

**Note L — Segment and Geographic Information**

*Segment Information:* The Company operates in a single business segment: the design, manufacture and marketing of an integrated line of proprietary non-invasive cardiac resuscitation devices, and systems used for emergency resuscitation of cardiac arrest victims. In order to make operating and strategic decisions, ZOLL's chief operating decision maker evaluates revenue performance based on the worldwide revenues of four customer/product categories but, due to shared infrastructures, profitability based on an enterprise-wide measure. These customer/product categories consist of (1) the sale of cardiac resuscitation devices and accessories to the North American hospital market, (2) the sale of the same items and data collection management software to North American pre-hospital market, (3) the sale of disposable/other

**ZOLL MEDICAL CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

products in North America, (4) the sale of cardiac resuscitation devices and accessories and disposable electrodes to the international market.

Net sales by customer/product categories were as follows:

	<u>2003</u>	<u>2002</u>	<u>2001</u>
	(000's omitted)		
Hospital Market — North America .....	\$ 63,558	\$ 50,686	\$ 38,635
Pre-hospital Market — North America .....	55,357	46,958	36,872
Other — North America .....	19,602	19,372	18,351
International Market — excluding North America .....	<u>46,086</u>	<u>33,211</u>	<u>25,344</u>
	<u>\$184,603</u>	<u>\$150,227</u>	<u>\$119,202</u>

The Company reports assets on a consolidated basis to the chief operating decision maker.

*Geographic information:* Net sales by major geographical area, determined on the basis of destination of the goods, are as follows:

	<u>2003</u>	<u>2002</u>	<u>2001</u>
	(000's omitted, except per share data)		
United States .....	\$137,510	\$111,978	\$ 87,798
Foreign .....	<u>47,093</u>	<u>38,249</u>	<u>31,404</u>
	<u>\$184,603</u>	<u>\$150,227</u>	<u>\$119,202</u>

Long-lived assets located outside the United States are not material. In each of the years in the three year period ended September 28, 2003, no single customer represented over 10% of the Company's consolidated net sales.

**Note M — Quarterly Financial Data (Unaudited)**

Summarized quarterly financial data for 2003 and 2002 is as follows:

	<u>Quarter Ended</u>			
	<u>Sept. 28, 2003</u>	<u>June 29, 2003</u>	<u>March 30, 2003</u>	<u>Dec. 29, 2002</u>
	(000's omitted, except per share data)			
2003				
Net sales .....	\$50,206	\$44,716	\$46,589	\$43,092
Gross profit .....	29,270	25,363	25,443	23,050
Income from operations .....	7,077	3,883	3,417	2,769
Net income .....	4,867	2,947	2,755	2,281
Basic earnings per common share .....	\$ 0.54	\$ 0.33	\$ 0.31	\$ 0.25
Diluted earnings per common and equivalent share ..	\$ 0.53	\$ 0.32	\$ 0.30	\$ 0.25

ZOLL MEDICAL CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	Quarter Ended			
	Sept. 29, 2002	June 30, 2002	March 31, 2002	Dec. 30, 2001
	(000's omitted, except per share data)			
2002				
Net sales .....	\$47,377	\$34,792	\$34,713	\$33,345
Gross profit .....	26,819	19,982	19,293	18,859
Income from operations .....	6,520	2,007	2,503	2,549
Net income .....	4,540	1,899	1,897	1,894
Basic earnings per common share .....	\$ 0.51	\$ 0.21	\$ 0.21	\$ 0.21
Diluted earnings per common and equivalent share ..	\$ 0.50	\$ 0.21	\$ 0.21	\$ 0.21

**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

Not Applicable.

**Item 9A. Controls and Procedures**

As of the end of the period covered by this report, an evaluation had been performed under the supervision and with the participation of the Company's management, including the Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures. Based upon that evaluation, the Company's management, including the CEO and CFO, concluded that the Company's disclosure controls and procedures were effective as of September 28, 2003. There have been no significant changes in the Company's internal controls over financial reporting that occurred during the quarter ending September 28, 2003, that have materially affected, or are reasonably likely to materially affect our internal control over financial reporting.

**PART III**

**Item 10. Directors and Executive Officers of the Registrant**

The information appearing in our Proxy Statement for our 2004 Annual Meeting of Stockholders (the "Proxy Statement") under the caption "Proposal I — Election of a Class of Directors" is incorporated herein by reference.

Information regarding Executive Officers of the Company is detailed below:

**Executive Officers of Registrant**

<u>Name</u>	<u>Age</u>	<u>Position</u>
Richard A. Packer .....	46	Chairman, Chief Executive Officer and President
A. Ernest Whiton .....	42	Vice President of Administration and Chief Financial Officer
Steven K. Flora .....	52	Vice President, North American Sales
E.J. Jones .....	61	Vice President, International Sales
Donald R. Boucher .....	51	Vice President, Research and Development
Ward M. Hamilton .....	56	Vice President, Marketing
John P. Bergeron .....	52	Vice President and Corporate Treasurer
Edward T. Dunn .....	50	Vice President, Operations
Vane P. Clayton .....	44	President, Pinpoint Technologies

Mr. Packer joined the Company in 1992 and in November 1999 was appointed Chairman of the Board and Chief Executive Officer. Mr. Packer served as President, Chief Operating Officer and director from 1996 to his appointment as CEO. From 1992 to 1996 he served as Chief Financial Officer and Vice President of Operations of the Company. From 1987 to 1992 Mr. Packer served as Vice President of various functions for Whistler Corporation, a consumer electronics company. Prior to this, Mr. Packer was a manager with the consulting firm of PRTM/KPMG, specializing in operations of high technology companies. Mr. Packer received B.S. and M. Eng. degrees from the Rensselaer Polytechnic Institute and a M.B.A. from the Harvard Graduate School of Business Administration. Mr. Packer serves as a director of LifeCOR, Inc. and as a member of its compensation committee.

Mr. Whiton joined the Company as Vice President of Administration and Chief Financial Officer in January 1999. Prior to joining the Company, Mr. Whiton was Vice President and Chief Accounting Officer of Ionics, Inc., a global separations technology company, which he joined in 1993. Prior to Ionics,

he was a manager at Price Waterhouse. Mr. Whiton has received a B.S. in Accounting from Bentley College and a M.B.A. from the Harvard Graduate School of Business Administration.

Mr. Flora joined the Company as Vice President of North American Sales in September 1998. Prior to joining the Company, Mr. Flora served from 1981 to 1998 in various positions with Marquette Medical systems, a manufacturer of cardiovascular and physiological monitoring systems, most recently as Vice President of Sales. Mr. Flora received his B.S. in Biology from the University of Illinois.

Mr. Jones joined the Company as Vice President of International Sales in November 1998. Prior to joining the Company, Mr. Jones was Vice President of Operations with Apple Medical Corporation. He also spent 15 years with Millipore Corporation, holding various positions in Domestic and International Sales. Mr. Jones holds a B.S. in Microbiology/Biochemistry from the University of Illinois and is a graduate of the Advanced Management Program (AMP) from the Harvard Graduate School of Business Administration.

Mr. Boucher joined the Company as Vice President of Research and Development in December 1993. Prior to joining the Company, Mr. Boucher served from 1977 to 1993 with Corometrics Medical Systems, Inc., a manufacturer of fetal and neonatal monitors, most recently as Vice President of Engineering. Mr. Boucher received a M.B.A. from the University of Connecticut, an M.S.E. in bioengineering from the University of Pennsylvania, and a B.S. in engineering from Northeastern University.

Mr. Hamilton joined the Company as Vice President of Marketing in February 1992. Prior to this time, Mr. Hamilton served from 1985 to 1991 as Director of New Business Development and Director of Marketing for ACLS products for Laerdal Medical Corporation, a manufacturer of portable automated defibrillators, and from 1977 to 1985 as Marketing Manager for defibrillators and non-invasive blood pressure monitors for Datascope Corporation. Mr. Hamilton received a B.A. in political science from Hartwick College and a M.P.A. from the University of Southern California.

Mr. Bergeron joined the Company as Vice President and Corporate Treasurer in August 2000. Prior to joining the Company, Mr. Bergeron was Vice President at Ionics Corporation, a global separations technology company, where he also served as Corporate Treasurer and Tax Director. Prior to joining Ionics in 1988, Mr. Bergeron served in a variety of tax positions at other multinational corporations. Mr. Bergeron received a B.B.A. from the University of Massachusetts at Amherst and a M.S. in Taxation from Bentley College.

Mr. Dunn joined the Company as Director of Materials in April 1995. In November 1997, he was appointed Vice President of Operations. Prior to joining the Company, Mr. Dunn was Materials Manager at Baird Corporation, a manufacturer of spectrometers and night vision devices, which he joined in 1986. Prior to joining Baird, Mr. Dunn was Manufacturing Manager at Chelsea Clock Company, a manufacturer of marine clocks. Mr. Dunn received a B.S. in Industrial Engineering from Northeastern University.

Mr. Clayton joined the Company as President of Pinpoint Technologies in September of 2003. Prior to joining the Company, Mr. Clayton was President of TROY Wireless, a provider of WIFI and Bluetooth wireless software and hardware products. Prior to joining TROY, Mr. Clayton was COO and later CEO of SOS Wireless Communications. Prior to SOS, Mr. Clayton served from 1988 to 1993 at Raychem Corp, with his most recent role as sales manager with the EloTouch division, which manufactures touch-screen products. Mr. Clayton has received a B.S. in engineering from Purdue University and a M.B.A. from the Harvard Graduate School of Business Administration.

The Company has adopted a Code of Ethics that applies to its principal executive officer, principal financial officer and controller. This Code of Ethics was ratified by the Board of Directors in December 2003.

#### **Item 11. *Executive Compensation***

The information appearing in the Proxy Statement under the caption "Proposal 1 — Election of a Class of Directors — Executive Compensation" is incorporated herein by reference.

**Item 12. *Security Ownership of Certain Beneficial Owners and Management***

The information appearing in the Proxy Statement under the captions “Proposal 1 — Election of a Class of Directors” and “Other Matters — Principal and Management Stockholders” is incorporated herein by reference.

**Item 13. *Certain Relationships and Related Transactions***

The information appearing in the Proxy Statement under the caption “Proposal 1 — Election of a Class of Directors — Certain Relationships and Related Party Transaction” is incorporated herein by reference.

**Item 14. *Principal Accountant Fees and Services***

The information appearing in the Proxy Statement under the caption “Proposal 1 — Election of a Class of Directors — Independent Auditors” is incorporated herein by reference.

## SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS

<u>Classifications</u>	<u>Balance at Beginning of Period</u>	<u>Additions Charged to Costs and Expenses</u>	<u>Deductions</u>	<u>Balance at End of Period</u>
Year Ended September 28, 2003				
Allowance for doubtful accounts.....	\$3,462,000	\$1,694,000	\$467,000	\$4,689,000
Year Ended September 29, 2002				
Allowance for doubtful accounts.....	\$2,780,000	\$1,009,000	\$327,000	\$3,462,000
Year Ended September 30, 2001				
Allowance for doubtful accounts.....	\$1,895,000	\$1,648,000	\$763,000	\$2,780,000

### PART IV

#### Item 15. *Exhibits, Financial Statement Schedules, and Reports on Form 8-K*

- (a)(1) The following Consolidated Financial Statements, Notes thereto and Independent Auditors' Report are set forth under Item 8:

Report of Independent Auditors

Consolidated Balance Sheets

Consolidated Income Statements

Consolidated Statements of Stockholders' Equity and Comprehensive Income

Consolidated Statements of Cash Flows

Notes to Consolidated Financial Statements

- (a)(2) The following Consolidated Financial Statement Schedule is included herein:

Schedule II — Valuation and Qualifying Accounts

All other schedules have been omitted since the required information is not presented, the amounts are not sufficient to require submission of the schedules or because the information is included in the consolidated financial statements.

- (a)(3) The following is a complete list of Exhibits filed or incorporated by reference as part of this report:

- 3.1 Restated Articles of Organization.(2)
- 3.2 Amended and Restated By-laws.(2)
- 3.3 Shareholders Rights Plan.(5)
- 10.1 2001 Stock option Plan.(1)
- 10.2 1992 Stock Option Plan.(2)
- 10.3 1983 Incentive Stock Option Plan, as amended and restated February 6, 1990.(2)
- 10.4 Revolving Loan and Security Agreement dated March 9, 1992 between the Company and Brown Brothers Harriman &Co.(2)
- 10.10 Employment Agreement dated July 19, 1996 between the Company and Richard A. Packer regarding Mr. Packer's employment.(3)
- 10.11 Non Employee Directors' Stock Option Plan.(6)
- 10.12 Senior Executive Severance Agreement dated January 21, 2000 between the Company and Richard A. Packer.(7)

- 10.13 Executive Severance Agreement dated January 26, 2000 between the Company and A. Ernest Whiton.(7)
- 10.14 Code of Conduct(4)
- 21.1 Subsidiaries of the Company.(4)
- 23.1 Consent of Ernst & Young LLP.(4)
- 31.1 Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.(4)
- 31.2 Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.(4)
- 32.1 Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.(4)
- 32.2 Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.(4)

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Footnotes:

- (1) Incorporated by reference from the Company's Registration Statement on Form S-8, under the Securities Act of 1933 (Registration Statement No. 33-3101839).
- (2) Incorporated by reference from the Company's Registration Statement on Form S-1, as amended, under the Securities Act of 1933 (Registration Statement No. 33-47937).
- (3) Incorporated by reference from the Company's Annual Report for 1996 on Form 10-K, as amended, filed with the Securities and Exchange Commission on December 27, 1996.
- (4) Filed herewith.
- (5) Incorporated by reference from the Company's 8-K filed with the Securities and Exchange Commission on June 11, 1998.
- (6) Incorporated by reference from the Company's Registration Statement on Form S-8, under the Securities Act of 1933 (Registration Statement No. 33-368401).
- (7) Incorporated by reference from the Company's Annual Report for 2000 on Form 10-K, as amended, filed with the Securities and Exchange Commission on December 29, 2000.

## SIGNATURES

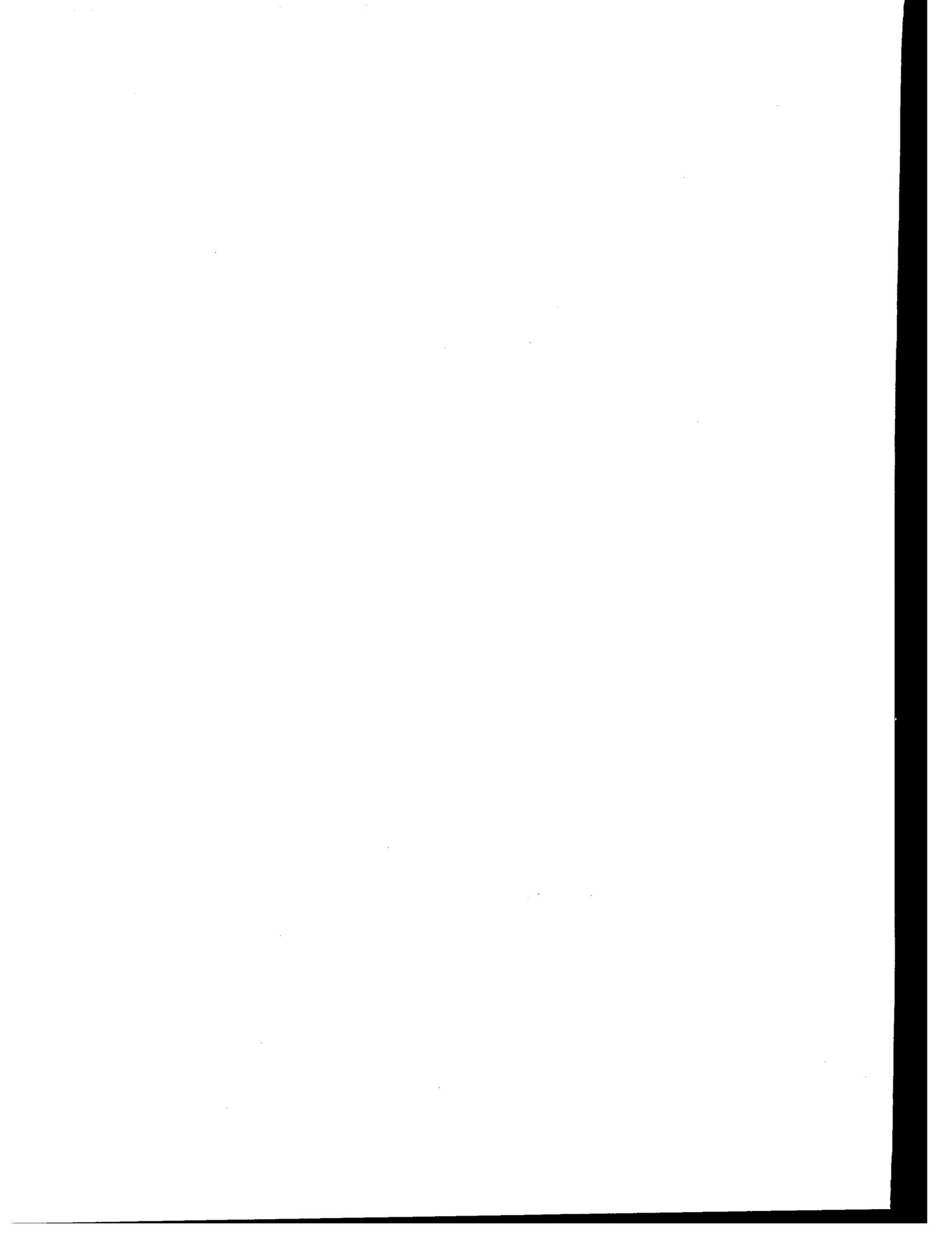
Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on December 18, 2003.

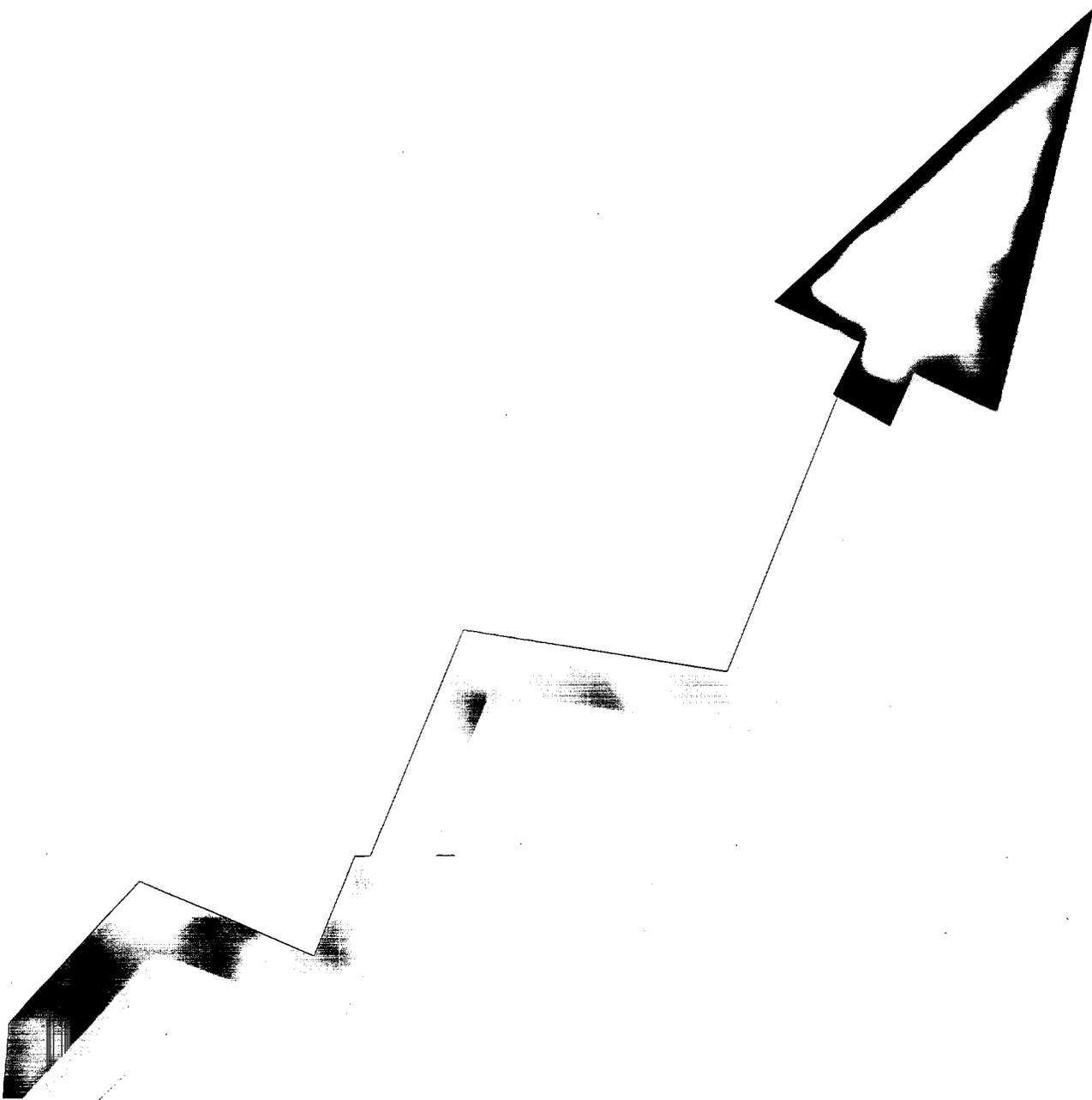
### ZOLL MEDICAL CORPORATION

By: /s/ RICHARD A. PACKER  
 Richard A. Packer  
*Chairman and Chief Executive Officer*

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ RICHARD A. PACKER Richard A. Packer	Chairman, Chief Executive Officer and President (Principal Executive Officer)	December 18, 2003
/s/ A. ERNEST WHITON A. Ernest Whiton	Chief Financial Officer (Principal Financial and Accounting Officer)	December 18, 2003
/s/ WILLARD M. BRIGHT, PH.D. Willard M. Bright, Ph.D.	Director	December 18, 2003
/s/ THOMAS M. CLAFLIN, II Thomas M. Claffin, II	Director	December 18, 2003
/s/ JAMES W. BIONDI, M.D. James W. Biondi, M.D.	Director	December 18, 2003
/s/ M. STEPHEN HEILMAN, M.D. M. Stephen Heilman, M.D.	Director	December 18, 2003
/s/ DANIEL M. MULVENA Daniel M. Mulvena	Director	December 18, 2003
/s/ BENSON F. SMITH Benson F. Smith	Director	December 18, 2003
/s/ ROBERT J. HALLIDAY Robert J. Halliday	Director	December 18, 2003





**ZOLL**  
*It's about time.*

## STOCK LISTING

ZOLL Medical Corporation Common Stock is traded on the NASDAQ National Market System under the symbol "ZOLL".

Transfer Agent  
Equiserve Trust Company, N.A.  
P.O. Box 43023  
Providence, RI 02940-3023  
www.equiserve.com  
1-877-282-1169

General Counsel  
Goodwin Procter LLP  
Boston, Massachusetts

Independent Auditors  
Ernst & Young LLP  
Boston, Massachusetts

Annual Meeting  
The annual meeting of stockholders will be held at 10 a.m. on February 11, 2004, at Goodwin Procter LLP, Conference Center, Exchange Place, 53 State Street, Boston, MA 02109.

Information Requests  
A copy of our Form 10-K, as filed with the Securities & Exchange Commission, is in the pocket of this annual report. It may be downloaded from the ZOLL web site. It also may be obtained upon written request to the Company at:  
Stockholder Relations  
ZOLL Medical Corporation  
269 Mill Road  
Chelmsford, MA 01824-4105

This document, along with our Form 10-K, constitutes ZOLL's 2003 Annual Report. If there is no Form 10-K, you do not have a complete Annual Report. The Form 10-K may be obtained upon written request to the company (see above).

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**ZOLL**  
*It's about time.*