

SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

SCHEDULE 13G  
Under the Securities Exchange Act of 1934  
(Amendment No. )\*

EP MEDSYSTEMS, INC.  
(Name of Issuer)

COMMON  
(Title of Class of Securities)

26881P103  
(CUSIP Number)

Check the following box if a fee is being paid with this statement [ ].

(A fee is not required only if the filing person: (1) has a previous statement on file reporting beneficial ownership of more than five percent of the class of securities described in Item 1; and (2) has filed no amendment subsequent thereto reporting beneficial ownership of five percent or less of such class.) (See Rule 13d-7.)

\*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

(Continued on following page(s))

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CUSIP No. 26881P103

13G

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1. NAME OF REPORTING PERSON  
SS OR IRS IDENTIFICATION NO. OF ABOVE PERSON

Medtronic, Inc.  
41-0793183

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a) [ ]  
(b) [ ]

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

MN

|                                                                   |    |                          |         |
|-------------------------------------------------------------------|----|--------------------------|---------|
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 5. | SOLE VOTING POWER        | 608,000 |
|                                                                   | 6. | SHARED VOTING POWER      | NONE    |
|                                                                   | 7. | SOLE DISPOSITIVE POWER   | 608,000 |
|                                                                   | 8. | SHARED DISPOSITIVE POWER | NONE    |

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

608,000 (Includes an option to purchase 60,000 shares of EP MEDSYSTEMS

Common Stock at a price of \$2.00 per share, which option was granted to Lester J. Swenson in payment for services as a director of EP MEDSYSTEMS, and was subsequently transferred to Medtronic by Mr. Swenson. The option expires November 29, 2005 and vests at the rate of 1,000 shares per month, for a period of 60 months, commencing December 1, 1995.)

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

[ ]

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

8.0%

12. TYPE OF REPORTING PERSON\*

CO

\*SEE INSTRUCTIONS BEFORE FILLING OUT!

Item 1(a) Name of Issuer

EP MEDSYSTEMS, INC.

Item 1(b) Address of Issuer's Principal Executive Offices:

58 Route 46 West  
Budd Lake, NJ 07828

Item 2(a) Name of Person Filing:

Medtronic, Inc.

Item 2(b) Address of Principal Business Office or, if none, residence:

7000 Central Avenue N.E.  
Minneapolis, MN 55432

Item 2(c) Citizenship

MN

Item 2(d) Title of Class of Securities

Common Stock

Item 2(e) CUSIP No.

26881P103

Item 3 Statement Filed Pursuant to Rules 13d-1(b) or 13d-2(b):

N/A

Item 4(a) Amount Beneficially Owned:

See Item 9, pg. 2

Item 4(b) Percent of Class:

See item 11, pg. 2

Item 4(c) Number of Shares as to Which Such Person has:

(i) sole power to vote or direct the vote

See Item 5, pg. 2

(ii) shared power to vote or to direct the vote

None

(iii) sole power to dispose or to direct the disposition of

See Item 7, pg. 2

(iv) shared power to dispose or to direct the disposition  
of

None

Item 5 Ownership of Five Percent or Less of a Class:

N/A

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Item 6 Ownership of More than Five Percent on Behalf of Another  
Person:

N/A

Item 7 Identification and Classification of the Subsidiary  
Which Acquired the Security Being Reported on by the Parent  
Holding Company:

N/A

Item 8 Identification and Classification of Members of the Group:

N/A

Item 9 Notice of Dissolution of Group:

N/A

Item 10 Certification:

By signing below, I certify that to the best of my knowledge  
and belief, the securities referred to above were acquired in  
the ordinary course of business and were not acquired for the  
purpose of and do not have the effect of changing or  
influencing the control of the issuer of such securities and  
were not acquired in connection with or as a participant in  
any transaction having such purpose or effect.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I  
certify that the information set forth in this statement is true, complete and  
correct.

Date: February 14, 1997

/s/ Robert L. Ryan

Robert L. Ryan  
Chief Financial Officer

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