

Microwave Filter Company, Inc.
6743 Kinne Street
East Syracuse, New York 13057
Notice of Annual Meeting of Shareholders

To the Shareholders of Microwave Filter Company, Inc.:

At the direction of the Board of Directors of Microwave Filter Company, Inc., a New York corporation (the "Company"), notice is hereby given that the Annual meeting of Shareholders of the Company (the "Meeting") will be held at 10:00 a.m. on Wednesday, March 30, 2011 at the Carrier Circle Hotel (formerly the Holiday Inn), Carrier Circle, 6555 Old Collamer Road South, East Syracuse, New York 13057 for the following purposes:

Proposal 1. The election of 3 directors to hold office until the Annual Meeting of the Shareholders at which their term expires or until their successors have been duly elected;

Proposal 2. The ratification of the appointment of EFP Rotenberg, LLP, Certified Public Accountants, as the Company's independent registered public accounting firm for the 2011 fiscal year;

The Board of Directors has fixed the close of business on February 11, 2011 as the record date for the determination of shareholders entitled to notice of and to vote at the Meeting, or any adjournments thereof.

By order of the Board of Directors



Robert R. Andrews
Chairman of the Board

Dated: February 25, 2011
Syracuse, New York

YOUR VOTE IS IMPORTANT. YOU ARE THEREFORE REQUESTED TO SIGN AND RETURN THE ENCLOSED PROXY AS PROMPTLY AS POSSIBLE, EVEN IF YOU EXPECT TO BE PRESENT AT THE MEETING. YOU MAY WITHDRAW YOUR PROXY AT ANY TIME PRIOR TO THE MEETING, OR IF YOU DO ATTEND THE MEETING, YOU MAY WITHDRAW YOUR PROXY AT THAT TIME AND VOTE IN PERSON IF YOU WISH.

MICROWAVE FILTER COMPANY, INC.
Proxy Statement for Annual Meeting of Shareholders

General

The enclosed Proxy is solicited on behalf of the Board of Directors of Microwave Filter Company, Inc. (the "Company") for use at the Company's Annual Meeting of Shareholders (the "Annual Meeting") to be held on Wednesday, March 30, 2011 at 10:00 a.m. local time or at any adjournment or postponement thereof, for the purposes set forth herein and in the accompanying Notice of Annual Meeting of Shareholders. The Annual Meeting will be held at the Carrier Circle Hotel (formerly the Holiday Inn), Carrier Circle, 6555 Old Collamer Road South, East Syracuse, New York 13057.

The Company's principal executive offices are located at 6743 Kinne Street, East Syracuse, New York 13057. The telephone number at that address is (315) 438-4700.

These proxy solicitation materials and the Annual Report to Shareholders were first mailed on or about February 25, 2011 to all shareholders entitled to vote at the Annual Meeting.

Record Date and Shares Outstanding

Shareholders of record at the close of business on February 11, 2011 are entitled to notice of, and to vote at, the Annual Meeting. At the record date 2,588,144 shares of the Company's common stock were issued, outstanding and entitled to vote at the Annual Meeting.

Availability of Proxy Materials

Our Annual Report to Shareholders and this Proxy Statement are available on the Company's website at www.microwavefilter.com.

Revocability of Proxies

Any proxy given pursuant to this solicitation may be revoked by the person giving it at any time before its use by delivering to the Secretary of the Company a written notice of revocation or a duly executed proxy bearing a later date or by attending the Annual Meeting and voting in person.

Voting and Solicitation

Every shareholder voting for the election for Directors is entitled to one vote for each share held of record on the record date. Directors are elected by a plurality of the votes cast at the meeting.

A quorum at the Annual Meeting shall consist of one-third (1/3) of the outstanding shares entitled to vote, represented either in person or proxy. Abstentions are counted as present for the purpose of determining the presence or absence of a quorum for the transaction of business. Votes against a candidate and votes withheld from voting for a candidate will have no effect on the election of directors.

If a stockholder is the beneficial owner of shares held in "street name" by a bank or brokerage firm, such bank or brokerage firm, as the record holder of the shares, is required to vote those shares in accordance with such stockholder's instructions. If the stockholder does not give instructions to such bank or brokerage firm, it will nevertheless be entitled to vote the shares with respect to certain "discretionary" items, but will not be permitted to vote such stockholder's shares with respect to "non-discretionary" items. In the case of non-discretionary items, the shares will be treated as "broker non-votes."

Shares treated as broker non-votes will be included for purposes of calculating the presence of a quorum. Otherwise, shares represented by broker non-votes will be treated as shares not entitled to vote on a proposal. Broker non-votes will not be counted as votes cast "for" or votes "withheld" for the election of directors.

The proposal to ratify the appointment of EFP Rotenberg, LLP as the Company's independent auditor for the fiscal year ending September 30, 2011 as well as any other matter properly submitted to shareholders for their consideration at the Annual Meeting, will be approved if a majority of the votes cast at the Annual meeting are voted "FOR" those proposals.

The cost of this solicitation will be borne by the Company. The Company has retained Regan & Associates, Inc. to assist in the solicitation of proxies at a fee of \$6,000 (which includes expenses.) In addition, the Company may reimburse brokerage firms and other persons representing beneficial owners of shares for their expenses in forwarding solicitation material to such beneficial owners. Proxies also may be solicited by certain of the Company's directors, officers and regular employees, without additional compensation, personally or by telephone or by telegram.

Deadline for Receipt of Shareholder Proposals

Proposals of shareholders which are intended to be presented by such shareholders at the Company's 2012 Annual Meeting must be received by the Secretary of the Company at the Company's principal executive offices no later than November 1, 2011 in order to be included in the proxy soliciting material relating to that meeting. Such proposals should be sent by certified mail, return receipt requested.

Shareholder Communications with Directors

Shareholders who want to communicate with the Board or an individual director can write to: Richard Jones, Corporate Secretary, Microwave Filter Company, Inc., 6743 Kinne Street, East Syracuse, New York 13057. Your letter should indicate that you are a shareholder of Microwave Filter Company, Inc. Depending on the subject matter, management will:

Forward the communication to the director or directors to whom it is addressed; or

Attempt to handle the inquiry directly, for example, requests for information or stock-related matters.

Corporate Governance

Our executive officers, management and employees conduct our business under the direction of the Chief Executive Officer and with the independent oversight of our Board. Our Board is composed of directors who are not employed by us, with the exception of Mr. Fahrenkrug and Mr. Jones. A non-executive director serves as Chairman of the Board. We believe that having a non-executive Chairman of the Board emphasizes the importance of the Board's objectivity and independence from management and best promotes the effective functioning of the Board's oversight role. At regularly scheduled Board meetings, our non-employee directors meet in executive session without management present. Our Board also ensures that we have an effective management team in place to run the Company and serves to protect and advance the long-term interests of our shareholders.

Oversight of risk management is a responsibility of the Board of Directors and is an integral part of the Board's oversight of our business. The Company's senior management is primarily responsible for managing the day-to-day risks of the Company's business, and is best equipped to assess and manage those risks. The Board regularly receives reports on the Company's exposure to risk from senior management and reassesses the management of those risks throughout the year.

Board Meetings and Committees

The Board of Directors held a total of five meetings during the fiscal year ending September 30, 2010. Each Director attended at least 75% of all such meetings of the Board of Directors and of the committees of the Board on which he or she served during fiscal 2010 .

The Company's Audit Committee currently consists of Sidney Chong, Chair, Daniel Galbally, Frank S. Markovich and Robert R. Andrews. All members of the Audit Committee are independent of management (as independence is defined in the Nasdaq listing standards). The purpose of the Audit Committee is to assist the Board of Directors' oversight of the Company's accounting and financial reporting processes and the audits of the Company's financial statements. The Audit Committee operates pursuant to a Charter approved by the Company's Board of Directors. The Audit Committee held four meetings during fiscal year 2010. The Audit Committee's charter is available on our website at www.microwavefilter.com.

The Company's Compensation Committee currently consists of John Kennedy, Chair, Trudi B. Artini, Robert Andrews, Sidney Chong and Daniel Galbally. The Compensation Committee reviews compensation and benefits for the Company's executives. The Compensation Committee did not hold a meeting during fiscal year 2010.

The Company's Nominating Committee currently consists of Daniel Galbally, Chair, Robert Andrews, Perry Harvey, John Kennedy and Frank S. Markovich. All members of the Nominating Committee are independent of management (as independence is defined in the Nasdaq listing standards). The Nominating Committee operates pursuant to a Charter approved by the Company's Board of Directors. The Nominating Committee held one meeting during fiscal year 2010.

When considering a potential candidate for membership on our Board, the Nominating Committee considers relevant business and industry experience and demonstrated character and judgement. There are no differences in the manner in which the Nominating Committee evaluates a candidate that is recommended for nomination for membership on our Board by a shareholder. The Nominating Committee has not received any recommended nominations from any of our shareholders in connection with the Annual Meeting.

The Nominating Committee will consider shareholder nominations for directors in writing to our corporate secretary prior to the meeting. To be timely, the notice must be delivered within the time period permitted for submission of a stockholder proposal as described under "Shareholder Proposals." Such notice must be accompanied by the nominee's written consent, contain information relating to the business experience and background of the nominee and contain information with respect to the nominating shareholder and persons acting in concert with the nominating shareholder.

The Nominating Committee is responsible for recommending to our full Board of Directors nominees for election of directors. To fulfill this role, the committee interviews, evaluates and recommends individuals for membership on our Board and committees thereof.

Each of the Company's directors is encouraged to attend the annual meeting of shareholders in person. Last year seven of nine directors attended the annual shareholders meeting.

The Company also has a standing Executive Committee.

Compensation of Directors

Non-officer Directors currently receive fees of \$300.00 per board meeting and \$300.00 per committee meeting. MFC also reimburses Directors for reasonable expenses incurred in attending meetings. The Chairman of the Board currently receives fees of \$500.00 per board meeting and \$500.00 per committee meeting. Officer members receive no compensation for their attendance at meetings.

The following table summarizes the compensation paid to non employee Directors for their service to the Board and its committees in fiscal 2010.

Director Compensation Table

Name	Fees earned or paid in cash
Robert R. Andrews	\$4,000
Trudi B. Artini	\$1,500
Sidney Chong	\$3,000
Daniel Galbally	\$3,000
Perry A. Harvey	\$1,800
John Kennedy	\$1,800
Frank S. Markovich	\$3,000

Security Ownership of Certain Beneficial Owners and Management

The following table sets forth certain information regarding beneficial ownership of the Company's common stock as of February 11, 2011 (i) by each person who is known by the Company to own beneficially more than 5% of the Company's common stock, (ii) each Director of the Company and (iii) all Directors and Executive Officers as a group.

Directors, Officers	Shares Beneficially Owned	
	Number	Percent
Trudi B. Artini *	32,435	1.3%
Carl F. Fahrenkrug *	72,298	2.8%
Frank S. Markovich *	4,340	**
Daniel Galbally *	0	**
Sidney Chong *	335	**
Robert R. Andrews *	1,214	**
Richard L. Jones *	0	**
Perry A. Harvey *	0	**
John J. Kennedy *	500	**
All Directors and Executive Officers as a group (eleven persons)	111,122	4.3%

*Directors of the Company.

**Denotes less than one percent of class.

5% Shareholders	Shares Beneficially Owned	
	Number	Percent
Hummingbird Management, LLC (1) 145 East 57 th Street – 8 th Floor New York, New York 10022	417,578	16.1%

- (1) Based on the share information for Hummingbird Management, LLC reported on Schedule 13D filed by them on December 16, 2009. Hummingbird Management, LLC reported sole voting power and sole dispositive power to all such shares and shared voting power with respect to none of the shares.

Compensation Committee Interlocks and Insider Participation

No member of the Compensation Committee was or is an officer or employee of the Company or any of its subsidiaries.

Compliance with Section 16(a) of the Securities Exchange Act

Section 16(a) of the Securities Exchange Act of 1934 requires the Company's executive officers and directors and persons who own more than 10% of a registered class of the Company's equity securities, to file reports of ownership and changes of ownership with the Securities and Exchange Commission and the National Association of Securities Dealers, Inc. Such officers, directors and 10% shareholders are also required by SEC Rules to furnish the Company with copies of all Section 16(a) forms that they file. Based solely on its review of such reports received by it, the Company believes that its officers, directors and 10% shareholders complied with all Section 16(a) filing requirements for the fiscal year ended September 30, 2010.

EXECUTIVE COMPENSATION AND OTHER MATTERS

Executive Compensation

The Company's guiding compensation philosophy is to provide compensation that rewards individual and organizational performance. The Company aims to make executive compensation sensitive to Company performance, which is defined in terms of revenue growth and profitability. Compensation must also be competitive, thereby enabling the Company to attract, retain and motivate highly-qualified individuals who contribute to the Company's success.

The following table sets forth the annual and long-term compensation of the Company's Chief Executive Officer for services to the Company during the two fiscal years ended September 30, 2010.

Name and Principal Position	Year	Annual Compensation		
		Salary \$	Bonus \$	Other \$(1)
Carl F. Fahrenkrug	2010	120,094	0	62,929
President and CEO	2009	106,632	0	7,974

(1) All other compensation consists of the following:

	Fiscal 2010 \$	Fiscal 2009 \$
Accrued Vacation Paid	51,082	0
Employer Match for 401(k) Plan	10,271	6,398
Life Insurance	667	667
Accidental Death & Dismemberment and Long-Term Disability	909	909

Mr. Fahrenkrug's salary for fiscal year's 2010 and 2009 was \$125,000, set by the Board of Directors in 2007. Mr. Fahrenkrug also receives five weeks of paid vacation each calendar year and participation in all benefits, plans and programs available to all employees.

During both fiscal 2010 and 2009 Mr. Fahrenkrug took a voluntary pay cut due to the downturn in business and the current economic climate.

Option Grants and Exercises

There were no options granted or exercised by the executive officer listed in the executive compensation table above during the last fiscal year.

**PROPOSAL ONE
ELECTION OF DIRECTORS**

Nominees

Three Directors are to be elected at the Annual Meeting. Unless otherwise instructed, the proxy holders will vote the proxies received by them for the three nominees named below, all of whom are presently Directors of the Company. In the event that any nominee is unable or declines to serve as a Director at the time of the Annual Meeting, the proxies will be voted for any nominee who shall be designated by the present Board of Directors to fill the vacancy. A term of office of three years for each person elected as a Director will continue to the Annual Meeting of Shareholders at which their term expires or until his or her successor has been elected and qualified. It is not expected that any nominee will be unable or will decline to serve as a Director.

The name of and certain information regarding each nominee are set forth below.

Director

Principal Occupation and Qualifications

CARL F. FAHRENKRUG
Age 68
Director since 1984

Mr. Fahrenkrug was appointed President and Chief Executive Officer of MFC on October 7, 1992. He has also served served as President and Chief Executive Officer of NSI since prior to 1986. He served as Vice President of Engineering at Microwave Systems, Inc., Syracuse, N.Y. from 1972 – 1976. Mr. Fahrenkrug has a B.S. and M.S. in Engineering and an MBA from Syracuse University.

Mr. Fahrenkrug brings to the Board executive leadership and industry experience. His thorough knowledge of our business, products, strategy, people, operations and competition provides us with strong leadership.

DANIEL P. GALBALLY
Age 63
Director since 1995

Mr. Galbally is an accountant for Nucor Steel Auburn, Inc. in Auburn, N.Y. Prior to joining Nucor Steel Auburn, he was the Controller of Diamond Card Exchange, Inc. in Syracuse, N.Y. He was the Controller of Evaporated Metal Films (EMF) in Ithaca, N. Y. Before joining EMF, he worked as Controller and acting Vice President of Finance at Philips Display Components Co. He has a B.S. degree in accounting and an MBA from Syracuse University.

Mr. Galbally brings to the board extensive financial and business experience and is considered an “audit committee financial expert” under SEC rules. Mr. Galbally’s extensive accounting and financial knowledge is an invaluable asset to the Board in its oversight of the integrity of our financial statements and the financial reporting process.

FRANK S. MARKOVICH
Age 66
Director since 1992

Mr. Markovich is a consultant in the manufacturing operations and training field. Prior to that, he was the Director of the Manufacturing Extension Partnership at UNIPEG Binghamton. He held various high level positions in operations, quality and product management in a 20 year career with BF Goodrich Aerospace, Simmonds Precision Engine Systems of Norwich, N.Y. He completed US Navy Electronics and Communications Schools and received an MBA from Syracuse University.

Mr. Markovich brings to the Board extensive business leadership experience and an intimate knowledge of manufacturing operations, quality assurance and product management.

**THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR"
THE ELECTION OF EACH OF THE NOMINEES**

MEMBERS OF THE BOARD OF DIRECTORS CONTINUING IN OFFICE

Directors Whose Terms Expire in 2012

Director

Principal Occupation and Qualifications

TRUDI B. ARTINI
Age 88
Director since 1974

Mrs. Artini is an independent investor in MFC and various other business enterprises in Syracuse, New York.

Mrs. Artini's longstanding service on our Board and as an investor provides her with a deep familiarity with our business and people which is an invaluable asset to the Board.

PERRY A. HARVEY
Age 58
Director since 2007

Mr. Harvey is a consultant in global strategic business planning and productivity and process improvement. He holds a Master of Science in Metallurgical Engineering and a Metallurgical Engineering Degree from the University of Wisconsin. He served as President of ESCO Turbine Technologies Group (TTG), Syracuse, New York from 2000 – 2007. He has served as a board member and president of the Investment Casting Institute and a board member of the Manufacturers Association of Central New York and the Foundry Educational Foundation Board.

Mr. Harvey brings to the Board extensive business leadership experience and an intimate knowledge in strategic planning and productivity and process improvement.

JOHN J. KENNEDY
Age 61
Director since 2009

Mr. Kennedy is the Senior Partner and Co-founder of Hawthorne Consulting Group, LLC, a continuous improvement consulting firm dedicated to the education and training of business owners, managers and their employees in the concepts of the Toyota Production System. Prior to that, Mr. Kennedy was a senior consultant with Seven Pines Consulting Group/Rutherford Associates. He has also held various management positions with Orion Bus Industries Ltd, General Motors Corp. and the Miller Brewing Company. He holds an MBA from Syracuse University and a BS degree from the University of Pennsylvania.

Mr. Kennedy brings to the Board extensive business leadership experience and an intimate knowledge in productivity and process improvement.

Directors Whose Terms Expire in 2013

Director

Principal Occupation and Qualifications

ROBERT R. ANDREWS
Age 69
Director since 1992

Mr. Andrews is the President and Principal shareholder of Morse Manufacturing Co., Inc., East Syracuse, N.Y. which produces specialized material handling equipment and has served in that capacity since prior to 1985. He received a B.A. degree from Arkansas University and has served as Vice President and a Director of the Manufacturers Association of Central New York, President of the Citizens Foundation, a Trustee of DeWitt Community Church, a Director of the Salvation Army and Chairman of the Business and Industry Council of Onondaga Community College. Mr. Andrews was elected Chairman of the Board of Directors of Microwave Filter Company, Inc. on November 17,2004.

Mr. Andrews brings extensive executive, management and operational experience as the President and Principal shareholder of a small manufacturing company.

SIDNEY K. CHONG
Age 69
Director since 1995

Mr. Chong was a corporate accountant for Carrols Corp. in Syracuse prior to his retirement in January 2011. Prior to joining Carrols Corp., he was a Senior Accountant with Price Waterhouse and Co. in New York City. Mr. Chong has a Bachelor of Science degree in accounting from California State University.

Mr. Chong brings to the board extensive financial and business experience and is considered an “audit committee financial expert” under SEC rules. Mr. Chong’s extensive accounting and financial knowledge is an invaluable asset to the Board in its oversight of the integrity of our financial statements and the financial reporting process.

RICHARD L. JONES
Age 62
Director since 2004

Mr. Jones was appointed a Director of Microwave Filter Company, Inc. on September 7, 2004. Mr. Jones has served as a Vice President and the Chief Financial Officer of Microwave Filter Company, Inc. since October 7, 1992. He has a Bachelor of Science degree in accounting from Syracuse University.

Mr. Jones brings to the Board extensive financial and business experience. His thorough knowledge of our business and operations is an invaluable asset to the Board.

PROPOSAL TWO
RATIFICATION OF APPOINTMENT OF INDEPENDENT PUBLIC ACCOUNTANTS

EFP Rotenberg, LLP, Certified Public Accountants, as successor by merger, effective October 1, 2009, to the registered public accounting firm Rotenberg & Co. LLP, has served as our principal accountants since 2005. The Audit Committee has appointed EFP Rotenberg, LLP as the Company's independent registered public accounting firm for the fiscal year ending September 30, 2011. There have been no disagreements on any matters of accounting principles or practices, financial statements disclosure or auditing scope or procedures with EFP Rotenberg, LLP. None of their reports have contained an adverse opinion or disclaimer of opinion and was not qualified or modified as to audit scope or accounting principles.

The Board of Directors has approved the selection of EFP Rotenberg, LLP to audit our financial statements for the fiscal year ending September 30, 2011, and seeks shareholder ratification of such appointment. Representatives of EFP Rotenberg, LLP are expected to be present at the Annual Meeting.

The Company's By-laws do not require that shareholders ratify the selection of EFP Rotenberg, LLP as the Company's independent registered public accounting firm. The Board, however, is submitting the selection of EFP Rotenberg, LLP to shareholders for ratification as a matter of good corporate practice. If shareholders do not ratify the selection, the Audit Committee will reconsider whether to retain EFP Rotenberg, LLP. Even if the selection is ratified, the Board and the Audit Committee at their discretion may change the appointment at any time during the year if they determine that such a change would be in the best interests of the Company and its shareholders.

**THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE RATIFICATION
OF THE APPOINTMENT OF THE INDEPENDENT REGISTERED PUBLIC
ACCOUNTING FIRM**

REPORT OF AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

The Audit Committee operates pursuant to a Charter approved by the Company's Board of Directors. The Audit Committee reports to the Board of Directors and is responsible for overseeing financial accounting and reporting, the system of internal controls established by management and the audit process of the Company. The Audit Committee Charter sets out the responsibilities, authority and specific duties of the Audit Committee. The Charter specifies, among other things, the structure and membership requirements of the Committee, as well as the relationship of the Audit Committee to the independent accountants and management of the Company.

The Audit Committee consists of four members, all of whom have been determined by the Board of Directors to be "independent" under the NASDAQ listing standards as previously in effect and as amended. The Committee members do not have any relationship to the Company that may interfere with the exercise of their independence from management and the Company. The Board of Directors of Microwave Filter Company, Inc. has determined that Mr. Chong and Mr. Galbally, both members of the Audit Committee, are "audit committee financial experts" as defined by the SEC's regulations. None of the Committee members are current officers or employees of the Company or its affiliates.

Audit Committee Report

The Audit Committee of the Company's Board of Directors has issued the following report with respect to the audited financial statements of the Company for the fiscal year ended September 30, 2010:

. The Audit Committee has reviewed and discussed with the Company's management and the independent auditor (EFP Rotenberg, LLP) the Company's fiscal 2010 audited financial statements;

. The Audit Committee has discussed with the Company's independent auditor (EFP Rotenberg, LLP) the matters required to be discussed by Statement on Auditing Standards No. 61, as amended (AICPA, Professional Standards, Vol. 1. AU section 380) as adopted by the Public Company accounting Board in Rule 3200T ;

. The Audit Committee has received the written disclosures and letter from the independent auditor required by applicable requirements of the Public Company Accounting Oversight Board regarding the auditor's communications with the audit committee concerning independence, and has discussed with the auditor their independence from the Company; and

Based on the review and discussions referred to in the three items above, the Audit Committee recommended to the Board of Directors that the audited financial statements be included in the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2010.

Submitted by the Audit Committee of the Company's Board of Directors:
Sidney K. Chong, Robert R. Andrews, Daniel P. Galbally, Frank S. Markovich

FEES PAID TO INDEPENDENT AUDITORS

Set forth below are the aggregate fees billed for professional services rendered to the Company by its independent auditors for fiscal 2010.

Audit Fees	\$42,500
Financial Information Systems Design and Implementation Fees	0
All Other Fees:	
Tax Services	5,500

Total fees	\$48,000
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Other Matters

The Company knows of no other matters to be submitted at the meeting. If any other matters properly come before the meeting, it is the intention of the persons named in the enclosed proxy to vote the shares they represent as the Board of Directors may recommend.

THE BOARD OF DIRECTORS

Dated: February 25, 2011