

AEROSONIC CORP /DE/
Form 11-K
June 29, 2011

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 11-K

ANNUAL REPORTS OF EMPLOYEE STOCK
PURCHASE, SAVINGS AND SIMILAR PLANS
PURSUANT TO SECTION 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934
For the Fiscal Year Ended December 31, 2010

OR

TRANSITION REPORT PURSUANT TO SECTION 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934
For the Transition Period _____ to _____

Commission File Number 1-11750

A. Full title of the plan and the address of the plan, if different from that of the issuer named below:

AEROSONIC CORPORATION 401(k) PLAN

B. Name of issuer of the securities held pursuant to the plan and the address of its principal executive office:

Aerosonic Corporation
1212 North Hercules Avenue
Clearwater, Florida 33765

Aerosonic Corporation 401(k) Plan
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Exhibits

23.1 Consent of Independent Registered Public Accounting Firm - Mayer Hoffman McCann P.C.

23.2 Consent of Independent Registered Public Accounting Firm - Kirkland, Russ, Murphy & Tapp, P.A.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Participants and Administrator of the
Aerosonic Corporation 401(k) Plan:

We have audited the accompanying statements of net assets available for benefits of Aerosonic Corporation 401(k) Plan as of December 31, 2010, and the related statement of changes in net assets available for benefits for the year then ended. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (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. The Plan has determined that it is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control over financial reporting. Accordingly, we express no such opinion. 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 audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of Aerosonic Corporation 401(k) Plan as of December 31, 2010, and the changes in net assets available for benefits for the year then ended, in conformity with accounting principles generally accepted in the United States of America.

Our audit was conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedule of assets (held at end of year) is presented for purposes of additional analysis and is not a required part of the basic financial statements, but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. This supplemental schedule has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

/s/ Mayer Hoffman McCann P.C.
Clearwater, Florida
June 29, 2011

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Participants and Administrator of the
Aerosonic Corporation 401(k) Plan:

We have audited the accompanying statements of net assets available for benefits of Aerosonic Corporation 401(k) Plan as of December 31, 2009 and the related statement of changes in net assets available for benefits for the year then ended. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (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. The Plan has determined that it is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control over financial reporting. Accordingly, we express no such opinion. 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 audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of Aerosonic Corporation 401(k) Plan as of December 31, 2009 and the changes in its net assets available for benefits for the year ended then ended in conformity with accounting principles generally accepted in the United States of America.

/s/ Kirkland, Russ, Murphy & Tapp, P.A.
Clearwater, Florida
June 29, 2010

AEROSONIC CORPORATION
401(k) PLAN

Statements of Net Assets Available for Benefits

| | December 31, | |
|---|--------------|-------------|
| | 2010 | 2009 |
| Assets | | |
| Investments, at fair value: | | |
| Aerosonic Corporation common stock | \$234,187 | \$279,121 |
| Registered investment companies | 2,987,044 | 3,008,138 |
| Common collective trusts | 731,267 | 688,845 |
| Total investments, at fair value | 3,952,498 | 3,976,104 |
| Receivables: | | |
| Contributions receivable | 8,779 | 13,223 |
| Promissory notes receivable | 222,222 | 243,577 |
| Total receivables | 231,001 | 256,800 |
| Net assets available for benefits at fair value | 4,183,499 | 4,232,904 |
| Adjustment from fair value to contract value for fully benefit responsive investment contract | (14,861) | 15,079 |
| Net assets available for benefits | \$4,168,638 | \$4,247,983 |

The accompanying Notes to Financial Statements are an integral part of these financial statements.

AEROSONIC CORPORATION
401(k) PLAN

Statement of Changes in Net Assets Available for Benefits
For the Year Ended December 31, 2010

| | |
|--|--------------|
| Additions to net assets attributed to: | |
| Investment income: | |
| Interest and dividends | \$ 43,367 |
| Net appreciation in fair value of investments | 330,607 |
| Total investment income | 373,974 |
| Contributions: | |
| Employer contributions | 79,127 |
| Participant contributions | 258,334 |
| Rollover contributions and transfers into the plan | 7,900 |
| Total additions | 719,335 |
| Deductions from net assets attributed to: | |
| Benefits paid to participants | (767,449) |
| Administrative expenses | (31,231) |
| Total deductions | (798,680) |
| Net decrease | (79,345) |
| Net assets available for plan benefits: | |
| Beginning of year | 4,247,983 |
| End of year | \$ 4,168,638 |

The accompanying Notes to Financial Statements are an integral part of these financial statements.

Aerosonic Corporation 401(k) Plan
Notes to Financial Statements
December 31, 2010 and 2009

1. Plan Description

The following description of the Aerosonic Corporation 401(k) Plan (the “Plan”) provides only general information. Participants of the Plan should refer to the Plan document for a more complete description of the Plan.

General

The Plan is a defined contribution plan that covers the eligible employees of Aerosonic Corporation (the “Company”) by allowing them a system of savings and salary deferral and by providing discretionary employer profit sharing contributions.

The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 (“ERISA”). The Plan was established on February 1, 1993, and has been amended from time to time thereafter.

Eligibility

Employees become eligible to participate in the Plan beginning on January 1, April 1, July 1, or October 1, immediately following completion of three months of service and attaining age 21.

Contributions

An eligible participant may voluntarily contribute, on a pre-tax basis, up to a maximum of 100% of his or her annual eligible compensation (up to the IRS maximum allowable amount) to the Plan. The maximum allowable pre-tax voluntary contribution, as determined under the Internal Revenue Code, was \$16,500 for both 2010 and 2009 Plan years, respectively. For participants over the age of 50, an additional catch-up contribution of \$5,500 is also allowed for both 2010 and 2009 Plan years, respectively. A participant also may roll over to the Plan amounts from individual retirement accounts or distributions from other qualified defined benefit or defined contribution plans.

The Company may also make contributions, in cash or Company common stock, to the Plan. The Company may make a matching contribution, as determined by the Board of Directors annually, of an amount equal to a percentage of a participant’s contributions up to a maximum percentage of eligible compensation. In the past, the Company contributed an amount equal to 100% of a participant’s contributions up to 3% of eligible compensation. As a result of the Company’s January 31, 2009 suspension of employer contributions, the total matching contribution made to the Plan amounted to \$0 in cash for the year ended December 31, 2009. Beginning June 11, 2010, the Company resumed employer contributions to the Plan. During the Plan year ended December 31, 2010, the Company made weekly matching contributions totaling \$79,127.

The Company may also make discretionary profit sharing contributions to the Plan which are allocated to a participant’s account based upon the participant’s annual compensation. The Company did not make discretionary profit sharing contributions to the Plan during the 2010 or 2009 Plan years.

Forfeitures

The balance of amounts forfeited by nonvested accounts of inactive participants as of December 31, 2010 and December 31, 2009 was \$377 and \$3,847, respectively. Under Article V of the Plan Document, forfeitures may first

be applied towards Plan expenses and then to reduce future employer contributions, other than elective contributions.

Participant Accounts

Each participant's account is credited with the participant's contributions, his or her pro rata share of Company matching and additional discretionary contributions, and an allocation of Plan earnings or losses, including market value adjustments on Plan investments and allocation of Plan expenses. All contributions are held in trust and invested by the Plan's trustee in accordance with the options selected by the participants (i.e. all investments are participant-directed). Participants can chose from a variety of investment options including common collective trusts and registered investment companies. Also, participants have the option to contribute to a fund which purchases Aerosonic Corporation common stock.

Plan earnings (losses) are allocated to a participant's account based on the participant's account balance as a percent of total invested assets in each investment fund. The benefit to which a participant is entitled under the Plan is the benefit that can be provided from the participant's vested account.

Vesting

Participants are immediately vested in their contributions to the Plan plus actual earnings and losses thereon. Participants become vested in employer matching and additional discretionary contributions (and earnings or losses thereon) according to the following schedule:

| Years of Service | Vesting Percentage |
|-------------------|--------------------|
| less than 2 | 0 % |
| 2 but less than 3 | 33 % |
| 3 but less than 4 | 67 % |
| 4 or more | 100 % |

Participants become fully vested upon death, disability, attainment of normal retirement age, or upon termination of the Plan.

Distribution of Participant Accounts

Distributions of a participant's account are made upon retirement from the Company at age 65, in cases of financial hardship, termination from service with the Company, death, or disability. Participants still employed who have reached the age of 59½ are eligible for one distribution per calendar year from the vested portion of their account. Distributions are made in a single lump-sum payment, in whole shares of Company common stock, or in cash, or partially in Company common stock or partially in cash, as determined by the Plan Administrator and based upon the relative proportion in which the participant's account balance under the Plan consists of Company stock or investments.

The Plan allows participants that are less than age 70½ to defer benefit payments until they cease employment.

Promissory notes receivable

Participants may borrow from their fund accounts a minimum of \$1,000 and up to a maximum of the lesser of \$50,000 or 50% of their vested account balance. A participant may not have more than two loans outstanding at any time. Loans, which are collateralized by the balance in the participant's account, bear interest at rates based upon the prime interest rate as published in The Wall Street Journal on the first business day of the month when the loan is drawn plus 1%. The loan rate of interest was 4.25% per annum during the 2010 and 2009 Plan years. All loans are repaid through salary reductions within a period of five years, except loans to acquire the participant's principal residence, for which the term of the loan may be up to ten years. Each loan is documented in the form of a promissory note from the participant and collateralized by this pledge on the participant's account balance.

2. Summary of Significant Accounting Policies

Basis of Accounting

The accompanying financial statements are prepared on the accrual basis of accounting, except for benefits paid, which are recorded when paid, in conformity with accounting principles generally accepted in the United States of America.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities and changes therein and disclosure of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates.

Adoption of New Accounting Pronouncements

In January 2010, the Financial Accounting Standards Board issued guidance that requires improved disclosures about fair value measurements. This guidance amended an earlier pronouncement which clarified certain existing fair value disclosures and required a number of additional disclosures. This guidance clarified that disclosures should be presented separately for each “class” of assets and liabilities measured at fair value and provided guidance on how to determine the appropriate classes of assets and liabilities to be presented. It also clarified the requirement for entities to disclose information about both the valuation techniques and inputs used in estimating Level 2 and Level 3 fair value measurements. In addition, it introduced new requirements to disclose the amounts (on a gross basis) and reasons for any significant transfers between Levels 1, 2, and 3 of the fair value hierarchy and to present information regarding the purchases, sales, issuances, and settlements of Level 3 assets and liabilities on a gross basis. With the exception of the requirement to present changes in Level 3 measurements on a gross basis, which is delayed until 2011, the Company adopted this guidance for Plan years 2010 and 2009 with no effect to the Plan’s net assets available for benefits or its changes in net assets available for benefits, as this guidance related only to fair value measurement disclosures.

In September 2010, the Financial Accounting Standards Board issued guidance that requires participant loans to be classified as notes receivable from participants, which are segregated from Plan investments and measured at their unpaid principal balance plus any accrued but unpaid interest, which approximates fair value. Previously, loans were classified as investments and measured at fair value. The guidance should be applied retrospectively to all periods presented. The Plan adopted this guidance as of December 31, 2010 and reclassified participant loans from Plan investments to a component of receivables for both periods presented in the statements of net assets available for benefits. Other than the reclassification requirements, the adoption of this standard did not have a material impact on the Plan’s financial statements.

Investment Valuation and Income Recognition

The Plan’s investments are stated at fair value. The fair value of registered investment companies is determined based on quoted market prices. Units held in bank common collective trust funds are reported at fair value based on the unit prices quoted by the fund, representing the fair value of the underlying investments. The value of the Company’s common stock is determined using the closing market price from the NYSE Amex at December 31, 2010.

Wells Fargo Stable Return Fund G (the “Fund”), a common collective trust, holds investments in fully benefit-responsive investment contracts that are stated at contract value which is equal to the principal balance plus accrued interest. The average yield earned by the Fund was 2.4% and 3.4% for the years ended December 31, 2010 and 2009, respectively. On a quarterly basis, the crediting interest rate was reset to determine the sensitivity of the Fund to the market yield. Accounting principles generally accepted in the United States of America require common collective trusts to be reported at fair value. However, contract value is the relevant measurement attribute for that portion of the net assets available for benefits of a defined contribution plan attributable to fully benefit-responsive investment contracts because contract value is the amount participants would receive if they were to initiate a permitted transaction under the terms of the Plan. At December 31, 2010 and 2009, the fund is recorded at fair value with an adjustment to contract value on the Statements of Net Assets Available for Benefit. The Company is not

aware of any event that would limit the Plan's ability to execute transactions at contract value.

Interest income is recognized when earned. Dividend income is recorded on the ex-dividend date. Realized gains and losses on investments are recognized upon the sale of the related investments and unrealized appreciation or depreciation is recognized at period end when the carrying values of the related investments are adjusted to their estimated fair market value. Purchases and sales of securities are recorded on a trade-date basis.

Earnings on investments are allocated on a pro-rata basis to individual participant accounts based on the type of investment and the ratio of each participant's individual account balance to the aggregate of participant account balances within investment type.

Net Appreciation in Fair Value of Investments

The Plan presents in the statement of changes in net assets available for benefits, the net appreciation in the fair value of investments, which consists of the realized gains or losses and the unrealized appreciation or depreciation on those investments.

Risks and Uncertainties

Investment securities are exposed to various risks, including those involving interest rates, the securities market, and credit conditions. Due to the level of risk associated with certain investment securities, changes in the values of such investment securities may involve declines in value in the near term and in the long term, and such declines could have a material adverse effect upon participants' account balances, and the amounts reported in the statements of net assets available for benefits.

Payment of Benefits

The Plan records benefit payments to withdrawing participants when paid. Under the rules for preparation of the Form 5500, the Plan's Form 5500 will reflect an accrual for the amount to be paid to participants who withdrew from the Plan prior to year-end, and who had requested a distribution which was approved but not yet paid at period end, if any. There were no unpaid distributions at December 31, 2010.

Administrative Expenses

Investment management service fees are paid directly from the Plan's assets. Other administrative expenses are paid directly by the Plan sponsor and consist primarily of accounting and legal fees.

3. Investments

The following presents investments that represent 5% or more of the Plan's net assets available for benefits as of December 31:

| | 2010 | 2009 |
|---------------------------------------|------------|------------|
| American Funds Growth R3 | \$ 982,367 | \$ 958,367 |
| Oakmark Equity & Inc. II | 607,433 | 575,463 |
| DWS Global Opportunities A | 412,939 | 400,483 |
| Wachovia Div Stable Value | * | 701,334 |
| Pimco Total Return / A | 279,884 | 349,402 |
| Aerosonic Corp Del Com Par \$0.40 | 234,187 | 279,121 |
| Riversource Diversified Equity Inc. A | * | 239,647 |
| Van Kampen US Mortgage /A | * | 259,993 |
| JP Morgan Government Bond A | 263,663 | * |
| Wells Fargo Stable Return Fund G | 711,493 | * |
| Columbia Diversified Eq Inc A | 233,941 | * |

* Did not represent 5% or more of net assets available for benefits

4. Net Appreciation in Estimated Fair Value of Investments

The Plan's investments (including gains and losses on investments bought and sold, as well as those held during the year), increased in value by \$330,607 during the year ended December 31, 2010, as follows:

| | |
|------------------------------------|------------|
| Registered investment companies | \$ 352,930 |
| Common Collective Trusts | 38,437 |
| Aerosonic Corporation common stock | (60,760) |
| Total Net Appreciation | \$ 330,607 |

5. Fair Value Measurements

FASB ASC 820 Fair Value Measurements and Disclosures (“FASB ASC 820”) establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy under FASB ASC 820 for financial assets and financial liabilities are described below:

- Level 1 – Inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – Inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs other than quoted prices that are observable for the assets or liabilities, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – Inputs to the valuation methodology are unobservable and significant to the fair value measurement. These inputs reflect management’s best estimate of what market participants would use in pricing the assets or liabilities at the measurement date.

A financial instrument’s categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Following is a description of the valuation methodologies used for instruments within the Plan measured at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Aerosonic Corporation Common Stock

The Company’s common stock is traded on an active exchange, and accordingly is classified in Level 1 of the fair value hierarchy.

Common Collective Trust

Investments in common collective trust funds are valued based on the year-end unit value; unit values are determined by the issuer or Third Party Administrator by dividing the fair values of the total net assets at year-end by the outstanding units. The fair values of the total net assets are determined by the nature of the underlying investments. Each underlying investment is valued at fair value in accordance with the valuation description associated with its investment type as stated above. Units in common collective trust funds, which hold benefit-responsive contracts, are priced based upon fair value of the underlying investments with an adjustment to contract value in the Statements of Net Assets Available for Benefits. These assets are classified within Level 2 of the valuation hierarchy. Adjustments to these assets, based upon unobservable inputs, may result in the fair value measurement being classified as Level 3 measurement, if those inputs are significant to the overall fair value measurement.

Registered Investment Companies

Investments in shares of registered investment companies are valued at quoted market prices, which represent the net asset values of shares held by the Plan at year-end. These assets are classified within Level 1 of the valuation hierarchy.

Plan assets have been classified in their entirety within a level of the fair value hierarchy based on the lowest level of input that is significant to the estimated fair value measurement, as set forth below:

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| | Estimated Fair Value Measurements at December 31, 2010 | | | |
|------------------------------------|--|---|---|---|
| | Total | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Unobservable Inputs (Level 3) |
| Aerosonic Corporation common stock | \$234,187 | \$ 234,187 | | |
| Registered investment companies | | | | |
| Large Company Equity | 1,906,280 | 1,906,280 | | |
| Fixed Income | 549,079 | 549,079 | | |
| Small Company Equity | 482,978 | 482,978 | | |
| Mid Company Equity | 37,237 | 37,237 | | |
| International Equity | 6,903 | 6,903 | | |
| International Bond | 4,567 | 4,567 | | |
| Common collective trusts | 731,267 | | \$ 731,267 | |
| Total Investments | \$3,952,498 | \$ 3,221,231 | \$ 731,267 | \$ - |

| | Estimated Fair Value Measurements at December 31, 2009 | | | |
|------------------------------------|--|---|---|---|
| | Total | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Unobservable Inputs (Level 3) |
| Aerosonic Corporation common stock | \$279,121 | \$ 279,121 | | |
| Registered investment companies | | | | |
| Large Company Equity | 1,839,457 | 1,839,457 | | |
| Fixed Income | 612,050 | 612,050 | | |
| Small Company Equity | 489,680 | 489,680 | | |
| Mid Company Equity | 59,797 | 59,797 | | |
| International Equity | 6,298 | 6,298 | | |
| International Bond | 856 | 856 | | |
| Common collective trusts | 688,845 | | \$ 688,845 | |
| Total Investments | \$3,976,104 | \$ 3,287,259 | \$ 688,845 | \$ - |

6. Tax Status

The most recent favorable determination letter received by the Plan was dated November 6, 2007 which provides that the form of the Plan qualifies under the applicable provisions of the Internal Revenue Code for exemption from federal income taxes. Accordingly, no provision for income taxes has been included in the accompanying financial statements. The Plan has been amended since receiving the determination letter. However, the Plan administrator and the Plan's tax counsel believe that the Plan is currently designed and being operated in compliance with the applicable requirements of the Internal Revenue Code.

7. Plan Amendment and Termination

Although the Company has not expressed any intent to do so, the Company has the right, under the Plan, to amend any or all provisions of the Plan as well as terminate the Plan at any time, subject to the provisions of ERISA. In the event of Plan termination, participants will become 100% vested in their accounts. All such vested interests shall be non-forfeitable.

8. Concentrations of Credit Risk

Financial instruments which potentially subject the Plan to concentrations of credit risk consist of the Plan's investments. Management maintains the Plan's investments with what management believes to be high credit quality financial institutions and attempts to limit the amount of credit exposure to any particular investment.

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9. Party-In-Interest

Section 3(14) of ERISA defines a party-in-interest to include, among others, fiduciaries or employees of the Plan, any person who provides services to the Plan, or an employer whose employees are covered by the Plan. Certain Plan investments are shares of registered investment companies and common collective trusts managed by Wachovia Bank, N.A which was acquired by Wells Fargo during the Plan year 2010. Wachovia Bank, N.A. is the trustee as defined by the Plan. Therefore, these transactions qualify as party-in-interest transactions. An employee of the Company serves as the Plan administrator of the Plan. In addition, Plan investments include investments in the Company's common stock; therefore, these transactions also qualify as party-in-interest transactions.

10. Prohibited Transactions

During 2010 and 2009, the Plan sponsor inadvertently failed to deposit \$0 and \$44,975, respectively, of participant deferrals within the required timeframe as stated by the United States Department of Labor ("DOL"). The DOL considers late deposits to be prohibited transactions. The Plan sponsor will file a Form 5330 and pay all applicable excise taxes on the amounts that were not deposited within the required timeframe. The excise tax payments will be made from the Plan sponsor's assets and not from assets of the Plan.

11. Reconciliation of Financial Statements to Form 5500

The following is a reconciliation of net assets available for benefits per the financial statements as of December 31, 2010 and 2009 to Form 5500:

| | 2010 | 2009 |
|--|-------------|-------------|
| Statements of net assets available for benefits: | | |
| Net assets available for benefits per the financial statements | \$4,168,638 | \$4,247,983 |
| Contributions receivable | (8,779) | (13,223) |
| Net assets available for benefits per Form 5500 | \$4,159,859 | \$4,234,760 |

The following is a reconciliation of changes in net assets per the financial statements for the year ended December 31, 2010, to total net income per Form 5500:

| | | |
|---|--|-------------|
| Statement of changes in net assets available for benefits: | | |
| Net decrease in net assets available for benefits | | \$(79,345) |
| Reversal of Plan year 2009 accrued revenue for contributions receivable | | 13,223 |
| Accrual of Plan year 2010 accrued revenue for contributions receivable | | (8,779) |
| Total net income per Form 5500 | | \$(74,901) |

12. Subsequent Events

On February 1, 2011, the Plan changed trustees from Wachovia Bank, N.A., which was acquired by Wells Fargo during the Plan year 2010, to Marshall & Ilsley Trust Company N.A.

AEROSONIC CORPORATION
401(k) PLAN

Schedule H, Line 4(i) - Schedule of Assets
(Held at End of Year)
December 31, 2010
EIN #74-1668471
Plan #002

| (a) | (b) | (c) | (d) | (e) |
|---|---|---|---------------|---------|
| Identity of issue, borrower, lessor or similar Party | Description of investment including maturity date, rate of interest, collateral, par or maturity date | Cost | Current value | |
| Common Collective Trusts | | | | |
| * | Wells Fargo | Total Return Bond Fund - B (210.54 Units) | ** | 2,406 |
| * | Wells Fargo | WF Stable Return Fund G (14,876.38 Units) | ** | 711,493 |
| * | Wells Fargo | WF Enhanced Stock Market G (25.93 Units) | ** | 2,507 |
| Registered Investment Companies | | | | |
| * | Wells Fargo | Enhanced Stock Market Fund - B (123.52 Units) | ** | 1,767 |
| * | Wells Fargo | WFA International Bd I (129.04 Units) | ** | 2,099 |
| * | Wells Fargo | WFA Str Lg Cap Grwth Fd AT (158.39 Units) | ** | 2,468 |
| | | Alger Small Cap Growth Inst FD I (1,960.85 Units) | ** | 54,590 |
| | | PIMCO Total Return/A (16,835.98 Units) | ** | 279,884 |
| | | Oakmark Equity & Inc. II (21,992.51 Units) | ** | 607,433 |
| | | American Europacific Growth R3 (3.52 Units) | ** | 143 |
| | | American Growth Fd R3 (32,768.02 Units) | ** | 982,367 |
| | | Columbia Diversified Eq Inc A (23,162.48 Units) | ** | 233,941 |
| | | Thornburg Core Growth R3 (4,480.12 Units) | ** | 69,800 |
| | | DWS Global Opportunities A (10,629.07 Units) | ** | 412,939 |
| | | DWS Dreman Small Cap Value A (322.94 Units) | ** | 11,897 |
| | | Columbia Mid Cap Value Opp A (4,552.06 Units) | ** | 35,825 |
| | | PIMCO Real Return/Institutional - AT (80.33 Units) | ** | 1,034 |
| | | JP Morgan Government Bond A (24,256.00 Units) | ** | 263,663 |
| | | T. Rowe Price Equity Income - AT (169.90 Units) | ** | 2,500 |
| | | Thornburg R5 (269.52 Units) | ** | 2,790 |
| | | Thornburg Intl Value Fd R4 (66.74 Units) | ** | 1,863 |
| | | PIMCO Total Return/Inst (216.08 Units) | ** | 2,760 |
| | | Dreyfus Premier Small Cap Equity - AT (165.97 Units) | ** | 1,778 |
| | | Alger Funds Small Cap Gro Inst/I - AT (140.11 Units) | ** | 1,774 |

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| | | | |
|-----------------------------|---|---|-----------|
| | T. Rowe Price Real Estate - AT (152.72 Units) | ** | 1,412 |
| | Lazard Emerging Markets/I AT (.07 Units) | ** | 1 |
| | Goldman Sachs Large Cap Val/I - AT (423.98 Units) | ** | 3,567 |
| | Goldman Sachs Structured (.49 Units) | ** | 5 |
| | JP Morgan High Yield - AT (136.18 Units) | ** | 1,738 |
| | T. Rowe Price Growth Stk - AT (261.86 Units) | ** | 2,432 |
| | Harbor International Instl (227.02 Units) | ** | 2,468 |
| | Janus Oversease Fund Class I (196.00 Units) | ** | 2,106 |
| Common Stock | | | |
| * | Aerosonic Corporation Common Stock | Equity Securities of Aerosonic Corporation, par value \$0.40 | 234,187 |
| | | | 234,187 |
| Promissory Notes Receivable | | | |
| * | Promissory Notes Receivable | Various maturities ranging from February 2011 to October 2015 (interest rates from 4.25% to 9.25%) | ** |
| | | | 222,222 |
| | | \$ | 234,187 |
| | | \$ | 4,159,859 |

* Party-in-interest

** Historical cost is not required as investments are participant-directed

AEROSONIC CORPORATION
401(K) PLAN

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Plan Administrator of the Aerosonic Corporation 401(k) Plan has duly caused this annual report to be signed on its behalf by the undersigned thereunto duly authorized.

Aerosonic Corporation 401(k) Plan

By: /s/ Kevin J. Purcell
Administrator and Agent for Service
of Legal Process of the Aerosonic
Corporation 401(k) Plan

June 29, 2011