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TOTAL NUMBER OF PAGES 17

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q
(Mark One)
[X] Quarterly report pursuant to Section 13 or $15(\mathrm{~d})$ of the Securities Exchange Act of 1934
For the quarterly period ended April 2, 1999

OR
[ ] Transition report pursuant to Section 13 or $15(\mathrm{~d})$ of the Securities Exchange Act of 1934


Commission File No. 0-25826

HARMONIC INC.
(formerly Harmonic Lightwaves, Inc.)
(Exact name of Registrant as specified in its charter)
DELAWARE 77-0201147
(State of incorporation)
(I.R.S. Employer Identification No.)

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 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 [X] No [ ]

As of May 7, 1999 there were $14,888,265$ shares of the Registrant's Common Stock outstanding.

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PART I - FINANCIAL INFORMATION

ITEM 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

HARMONIC INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(IN THOUSANDS, EXCEPT SHARE DATA)

| APRIL 2, | DECEMBER 31, |
| :---: | :---: |
| 1999 | 1998 |
| --------------------- |  |
| (UNAUDITED) |  |

ASSETS
Current assets:

Cash and cash equivalents
Accounts receivable, net
Inventories
Prepaid expenses and other assets

Total current assets
Property and equipment, net
Intangibles and other assets

| \$ | 11,432 | \$ | 9,178 |
| :---: | :---: | :---: | :---: |
|  | 20,753 |  | 17,646 |
|  | 21,246 |  | 22,385 |
|  | 1,282 |  | 1,175 |
|  | 54,713 |  | 50,384 |
|  | 11,071 |  | 10,726 |
|  | 1,241 |  | 1,314 |
| \$ | 67,025 | \$ | 62,424 |


| LIABILITIES AND STOCKHOLDERS' EQUITY |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Current liabilities: |  |  |  |  |
| Accounts payable | \$ | 8,252 | \$ | 7,534 |
| Accrued liabilities |  | 9,766 |  | 10,355 |
| Borrowings under bank facilities |  | 840 |  | -- |
| Current portion of long term debt |  | 177 |  | 177 |
| Total current liabilities |  | 19,035 |  | 18,066 |
| Long-term debt, less current portion |  | 350 |  | 400 |
| Other non-current liabilities |  | 510 |  | 484 |
| Stockholders' equity (deficit) : |  |  |  |  |
| Preferred stock, \$.001 par value, 5,000,000 shares authorized; no shares issued or outstanding |  | -- |  | -- |
| Common Stock, $\$ .001$ par value, $50,000,000$ shares authorized; 12,020,306 and 11, 725,844 shares issued and outstanding |  | 12 |  | 12 |
| Capital in excess of par value |  | 73,159 |  | 70,924 |
| Accumulated deficit |  | $(26,123)$ |  | $(27,472)$ |
| Currency translation |  | 82 |  | 10 |
| Total stockholders' equity |  | 47,130 |  | 43,474 |
|  | \$ | 67,025 | \$ | 62,424 |

The accompanying notes are an integral part of these condensed consolidated financial statements.

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HARMONIC INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(IN THOUSANDS, EXCEPT PER SHARE DATA)
(UNAUDITED)

|  | THREE MONTHS ENDED |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { APRIL 2, } \\ 1999 \end{gathered}$ |  | $\begin{gathered} \text { APRIL 3, } \\ 1998 \end{gathered}$ |  |
| Net sales | \$ | 30,263 | \$ | 16,204 |
| Cost of sales |  | 17,852 |  | 11,114 |
| Gross profit |  | 12,411 |  | 5,090 |
| Operating expenses: |  |  |  |  |
| Research and development |  | 3,694 |  | 3,423 |
| Sales and marketing |  | 5,180 |  | 4,072 |
| General and administrative |  | 1,770 |  | 2,148 |
| Acquired in-process technology |  | -- |  | 14,000 |
| Total operating expenses |  | 10,644 |  | 23,643 |
| Income (loss) from operations |  | 1,767 |  | $(18,553)$ |
| Interest and other income, net |  | 32 |  | 188 |
| Income (loss) before income taxes |  | 1,799 |  | $(18,365)$ |
| Provision for income taxes |  | 450 |  | -- |


| Net income (loss) | \$ | 1,349 | \$ | $(18,365)$ |
| :---: | :---: | :---: | :---: | :---: |
| Net income (loss) per share |  |  |  |  |
| Basic | \$ | 0.11 | \$ | (1.60) |
| Diluted | \$ | 0.10 | \$ | (1.60) |
| Weighted average shares |  |  |  |  |
| Basic |  | 11,924 |  | 11,475 |
| Diluted |  | 13,346 |  | 11,475 |

------------
\$ $(18,365)$

The accompanying notes are an integral part of these condensed consolidated financial statements.

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HARMONIC INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(IN THOUSANDS)
(UNAUDITED)

|  | three months ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | APRIL 2, 1999 |  | APRIL 3, 1998 |  |
| Cash flows from operating activities: |  |  |  |  |
| Net income (loss) | \$ | 1,349 | \$ | $(18,365)$ |
| Adjustments to reconcile net income (loss) to cash provided by (used in) operating activities: |  |  |  |  |
| Depreciation and amortization |  | 1,230 |  | 1,080 |
| Acquired in-process technology |  | -- |  | 14,000 |
| Changes in assets and liabilities, net of effect of acquisition: |  |  |  |  |
| Accounts receivable |  | $(3,107)$ |  | 2,209 |
| Inventories |  | 1,173 |  | (262) |
| Prepaid expenses and other assets |  | (105) |  | 454 |
| Accounts payable |  | 718 |  | 634 |
| Accrued and other liabilities |  | (564) |  | (186) |
| Net cash provided by (used in) operating activities |  | 694 |  | (436) |
| Cash flows used in investing activities: |  |  |  |  |
| Acquisition of property and equipment |  | $(1,499)$ |  | (761) |
| Acquisition of New Media Communication Ltd., net of cash received |  | -- |  | (272) |
| Net cash used in investing activities |  | $(1,499)$ |  | $(1,033)$ |
| Cash flows from financing activities: |  |  |  |  |
| Proceeds from issuance of Common Stock, net |  | 2,235 |  | 478 |
| Borrowings under bank line |  | 840 |  | -- |
| Repayments under bank line and term loan |  | (50) |  | (185) |
| Net cash provided by financing activities |  | 3,025 |  | 293 |
| Effect of exchange rate changes on cash and cash equivalents |  | 34 |  | (11) |
| Net increase (decrease) in cash and cash equivalents |  | 2,254 |  | $(1,187)$ |
| Cash and cash equivalents at beginning of period |  | 9,178 |  | 13,670 |
| Cash and cash equivalents at end of period | \$ | 11,432 | \$ | 12,483 |

Supplemental disclosure of cash flow information:

| $\$$ | 25 | $\$$ | 9 |
| :--- | :--- | :--- | :--- |
| $\$$ | 21 | $\$$ | 68 |

The accompanying notes are an integral part of these condensed consolidated financial statements.

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HARMONIC INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 - BASIS OF PRESENTATION

The accompanying unaudited condensed consolidated financial statements include all adjustments (consisting only of normal recurring adjustments) which Harmonic Inc. (the "Company") considers necessary for a fair presentation of the results of operations for the unaudited interim periods covered and the consolidated financial condition of the Company at the date of the balance sheets. The quarterly financial information is unaudited. This Quarterly Report on Form 10-Q should be read in conjunction with the Company's audited consolidated financial statements contained in the Company's Annual Report Form $10-\mathrm{K}$ and on Form 10-K/A which were filed with the Securities and Exchange Commission on March 17, 1999 and April 7, 1999 respectively. The interim results presented herein are not necessarily indicative of the results of operations that may be expected for the full fiscal year ending December 31, 1999, or any other future period.

NOTE 2 - ACQUISITION OF N.M. NEW MEDIA COMMUNICATION LTD.
In January 1998, the Company acquired N.M. New Media Communication Ltd. ("NMC"), which has recently changed its name to Harmonic Data Systems Ltd. ("HDS"), a privately held supplier of broadband, high-speed data delivery software and hardware, in exchange for the issuance of $1,037,911$ shares of Harmonic common stock, and the assumption of all outstanding NMC stock options. The acquisition was accounted for using the purchase method of accounting. Accordingly, the results of operations of NMC have been included in the consolidated financial statements of the Company from the date of the acquisition. The purchase price of $\$ 17.6$ million was allocated to the acquired assets, in-process technology and goodwill. A one-time charge of $\$ 14.0$ million was recorded in the first quarter of 1998 for in-process technology acquired. Goodwill of $\$ 1.5$ million is being amortized over the estimated useful life of five years. NMC has been a development stage company since its founding in 1996 and its revenues through April 2, 1999 were not material in relation to those of the Company.

NOTE 3 - INVENTORIES

|  | $\begin{gathered} \text { APRIL 2, } \\ 1999 \end{gathered}$ |  | DECEMBER 311998 |  |
| :---: | :---: | :---: | :---: | :---: |
| IN THOUSANDS | (UNAUDITED) |  |  |  |
| Raw materials | \$ | 4,865 | \$ | 3,747 |
| Work-in-process |  | 4,009 |  | 4,557 |
| Finished goods |  | 12,372 |  | 14,081 |
|  | \$ | 21,246 | \$ | 22,385 |

During the quarter ended December 31, 1997, the Company adopted Statement of Financial Accounting Standards No. 128, "Earnings Per Share" ("SFAS No. 128"). SFAS No. 128 requires presentation of both Basic EPS and Diluted EPS on the face of the statement of operations. Basic EPS, which replaces primary EPS, is computed by dividing net income available to common stockholders (numerator) by the weighted average number of common shares outstanding (denominator) during the period. Unlike the computation of primary EPS, Basic EPS excludes the dilutive effect of stock options and warrants. Diluted EPS replaces fully diluted EPS and

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gives effect to all dilutive potential common shares outstanding during a period. In computing Diluted EPS, the average price for the period is used in determining the number of shares assumed to be purchased from exercise of stock options and warrants rather than the higher of the average or ending price as used in the computation of fully diluted EPS.

The following table presents a reconciliation of the numerators and denominators of the Basic and Diluted EPS computations for the periods presented below:

|  | THREE MONTHS ENDED |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { APRIL 2, } \\ 1999 \end{gathered}$ |  | $\begin{gathered} \text { APRIL 3, } \\ 1998 \end{gathered}$ |  |
| IN THOUSANDS (UNAUDITED) |  |  |  |  |
| Net income (loss) (numerator) | \$ | 1,349 | \$ | $(18,365)$ |
| Shares calculation (denominator) : |  |  |  |  |
| Average shares outstanding - basic |  | 11,924 |  | 11,475 |
| Effect of Dilutive Securities: |  |  |  |  |
| Potential Common Stock relating to stock options and warrants$1,422$ |  |  |  |  |
| Average shares outstanding - diluted |  | 13,346 |  | 11,475 |
| Net income (loss) per share - basic | \$ | 0.11 | \$ | (1.60) |
| Net income (loss) per share - diluted | \$ | 0.10 | \$ | (1.60) |

Options and warrants to purchase 89,800 and 980,018 shares of Common Stock were outstanding during the quarters ended April 2, 1999 and April 3, 1998, respectively, but were not included in the computation of diluted EPS because either the option's exercise price was greater than the average market price of the Common Stock or inclusion of such options would have been antidilutive. The price ranges of these options and warrants were from $\$ 22.75$ to $\$ 27.63$ per share for the quarter ended April 2, 1999 and $\$ 0.30$ to $\$ 22.75$ per share for the quarter ended April 3, 1998.

NOTE 5 - COMPREHENSIVE INCOME (LOSS)

Effective January 1, 1998, the Company adopted Statement of Financial Accounting Standards No. 130, "Reporting Comprehensive Income" ("SFAS 130"). SFAS 130 requires that all items recognized under accounting standards as components of comprehensive income be reported in an annual financial statement that is displayed with the same prominence as other annual financial statements. The Company's total comprehensive income (loss) was as follows:

|  | $\begin{gathered} \text { APRIL 2, } \\ 1999 \end{gathered}$ |  | $\begin{gathered} \text { APRIL 3, } \\ 1998 \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| IN THOUSANDS (UNAUDITED) |  |  |  |
| Net income (loss) | \$ | 1,349 | \$ (18,365) |
| Other comprehensive income (loss) |  | 72 | (20) |
| Total comprehensive income (loss) | \$ | 1,421 | \$ (18, 385) |

NOTE 6 - SUBSEQUENT EVENT

In April 1999, the Company completed a public offering of $2,800,000$ at a price of $\$ 30.25$ per share. Of these $2,800,000$ shares, $2,000,000$ shares were sold by the Company and 800,000 shares were sold by selling shareholders. An additional 50,000 shares were sold by the company to the underwriters to cover over-allotments. Total net proceeds to the Company were approximately $\$ 58.3$ million, after underwriter discounts and commissions and estimated costs. The shares sold by selling shareholders included 720,000 shares held by Scientific-Atlanta, Inc. pursuant to the exercise of a warrant for which the Company received $\$ 4.0$ million upon such warrant's exercise.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

## OVERVIEW

Harmonic Inc. ("Harmonic" or the "Company") designs, manufactures and markets digital and fiber optic systems for delivering video, voice and data services over cable, satellite and wireless networks. Our solutions enable cable television and other network operators to provide a range of broadcast and interactive broadband services that include high-speed Internet access, telephony and video on demand. We offer a broad range of fiber optic transmission and digital headend products for hybrid fiber coax, satellite and wireless networks, and our acquisition of New Media Communication Ltd., which has recently changed its name to Harmonic Data Systems Ltd., in January 1998 has allowed us to develop and expand our product offerings to include high-speed data delivery software and hardware.

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, including statements regarding future revenue, gross margins, and expense levels, future capital expenditures, future cash flows and future borrowing capability. Actual results could differ materially from those projected in the forward-looking statements as a result of a number of factors, including those set forth under "Factors That May Affect Future Results of Operations" below and elsewhere in this Form 10-Q.

RESULTS OF OPERATIONS

Net Sales

The Company's net sales increased $87 \%$ from $\$ 16.2$ million in the first quarter of 1998 to $\$ 30.3$ million in the first quarter of 1999 . The increase in net sales was attributable primarily to the sale of new products, including METROLink DWDM systems, PWRBlazer Scaleable Nodes and TRANsend digital headend products, which began volume shipment during the middle of 1998. This increase was also attributable to increases in spending by domestic and international customers. During the first quarter of 1999, domestic sales increased by 89\%, principally due to increased shipments to TCI, which was recently acquired by AT\&T, while international sales increased $84 \%$ due primarily to higher shipments to Canada as severe weather conditions impacted sales to Canada in the first quarter of 1998. International sales represented $42 \%$ of net sales in the first quarter of 1999 compared to $43 \%$ in the first quarter of 1998.

Gross Profit

Gross profit increased from $\$ 5.1$ million (31\% of net sales) in the first quarter of 1998 to $\$ 12.4$ million (41\% of net sales) in the first quarter of 1999. The increases in gross profit and gross margins were due principally to higher unit sales volume which allowed the Company to improve fixed cost absorption and realize increasing economies of scale through higher absorption and purchasing volumes. In addition, in the first quarter of 1998, the Company increased its inventory reserves for certain existing products following the introduction of several new products.

Research and Development
Research and development expenses increased from \$3.4 million in the first quarter of 1998 to $\$ 3.7$ million in the first quarter of 1999 , but decreased as a percentage of net sales from $21 \%$ to $12 \%$. The increase in absolute spending was principally attributable to higher payroll expenses partially offset by lower prototype material costs in connection with the PWRBlazer Scaleable Node and TRANsend digital development programs due to commencement of volume shipment of these products during the middle of 1998. The decrease in research and development expenses as a percentage of net sales was principally attributable to increased net sales. Harmonic anticipates that research and development expenses will continue to increase in absolute dollars, although they may vary as a percentage of net sales.

Sales and Marketing

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Sales and marketing expenses increased from $\$ 4.1$ million in the first quarter of 1998 to $\$ 5.2$ million in the first quarter of 1999 , but decreased as a percentage of net sales from $25 \%$ to $17 \%$. The increase in absolute expenses was primarily due to higher headcount and costs associated with expansion of the sales and marketing organizations to provide wider geographic coverage and support for the new digital products, as well as higher sales commissions related to increased net sales. In addition, higher promotional expenses including one-time costs associated with the Company's name change contributed to the increase. The decrease in sales and marketing expenses as a percentage of net sales was principally attributable to increased net sales. Harmonic anticipates that sales and marketing expenses will continue to increase substantially in absolute dollars, although such expenses may vary as a percentage of net sales.

General and Administrative

General and administrative expenses decreased from $\$ 2.1$ million (13\% of net sales) in the first quarter of 1998 to $\$ 1.8$ million ( $6 \%$ of net sales) in the first quarter of 1999. The decrease in expenses was attributable to an increase in accounts receivable reserve levels in the first quarter of 1998 as a result of the financial situation in Asia which had impacted certain of the Company's distributors, partially offset by higher payroll expenses in the first quarter of 1999. The decrease in expenses as a percentage of net sales was also attributable to higher net sales in the first quarter of 1999. The Company expects to incur higher levels of general and administrative costs in the future, although such expenses may vary as a percentage of net sales.

Interest and Other Income, Net
Interest and other income, net, consisting principally of interest income, was
not significant in the first quarter of 1999 compared to $\$ 0.2$ million in the first quarter of 1998. The decrease in the first quarter of 1999 was due primarily to lower interest income on lower average cash and cash equivalents balances.

Income Taxes
A provision for income taxes of $\$ 450,000$ was recorded for the first quarter of 1999 based on an estimated annual tax rate of $25 \%$. No provision for income taxes was recorded for the first quarter of 1998 due to the net loss for the quarter. Beyond 1999, the Company expects to have an effective annual tax rate that approximates statutory rates.

## LIQUIDITY AND CAPITAL RESOURCES

Cash provided by operations was approximately $\$ 0.7$ million in the first quarter of 1999 compared to cash used in operations of approximately $\$ 0.4$ million in the first quarter of 1998. The increase in cash provided by operations was primarily due to net income in the first quarter of 1999 compared to a net loss in the first quarter of 1998 and lower inventory partially offset by higher accounts receivable.

Additions to property, plant and equipment were approximately $\$ 0.8$ million and $\$ 1.5$ million in the first quarters of 1998 and 1999 , respectively. The increase in 1999 compared to 1998 was due principally to higher expenditures for manufacturing and test equipment associated with expansion of production capacity. The Company expects to spend approximately $\$ 6.0$ million on capital expenditures in 1999, primarily for manufacturing and test equipment.

As of April 2, 1999, the Company's principal sources of liquidity included cash and cash equivalents of $\$ 11.4$ million and a bank line of credit facility which provides for borrowings up to $\$ 10.0$ million with a $\$ 3.0$ million equipment term loan sub-limit and expires in March 2000. Borrowings pursuant to the line bear interest at the bank's prime rate plus $0.5 \%$ (prime rate plus $1.0 \%$ under the term loan) and are payable monthly. The Company has guaranteed certain borrowing of its subsidiaries totaling $\$ 0.7$ million with letters of credit and had total letters of credit issued under the line of $\$ 2.0$ million, which expire at various dates over the next twelve months. Outstanding borrowings under credit facilities were $\$ 1.4$ million as of April 2, 1999. The

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Company expects that it will be able to renew or replace the line of credit facility upon its expiration on terms acceptable to the Company.

Subsequent to the end of the first quarter, Harmonic raised approximately $\$ 58.3$ million, net of offering costs from a public offering of its Common Stock which was completed in April 1999. The Company believes that the net proceeds from the public offering, together with its existing liquidity sources and anticipated funds from operations, will satisfy its cash requirements for at least the next twelve months.

## QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk represents the risk of loss that may impact the financial position, results of operations or cash flows of Harmonic due to adverse changes in market prices and rates. Harmonic is exposed to market risk because of changes in foreign currency exchange rates as measured against the U.S. Dollar and currencies of Harmonic's subsidiaries in Israel and in the United Kingdom. Harmonic has not engaged in hedging activities as of April 2, 1999 and does not expect to do so in the foreseeable future.

Harmonic has subsidiaries in Israel and the United Kingdom whose sales are generally denominated in U.S. dollars. While Harmonic does not anticipate that near-term changes in exchange rates will have a material impact on future operating results, fair values or cash flows, Harmonic cannot assure you that a sudden and significant change in the value of the Israeli Shekel or British Pound would not harm Harmonic's financial condition and results of operations.

Many currently installed computer systems and software products are coded to accept only two digit entries in the date code field. These date code fields will need to accept four digit entries to distinguish twenty-first century dates from twentieth century dates. As a result, many companies' software and computer systems may need to be upgraded or replaced in order to comply with such "Year 2000" or "Y2K" requirements.

Harmonic has established a corporate-wide program to address the Y2k issue. This program encompasses product, internal systems and supplier and business partner compliance. The project is comprised of identification of risks, assessment of risks, development of remediation or contingency plans and implementation and testing.

Based upon the assessments to date, all hardware products currently under development or released, and all software products currently under development are Y2K compliant. Certain software products currently installed at customer sites are not Y2K compliant and Harmonic is working with its customers to provide migration paths for each product. Harmonic's significant internal systems have been purchased from outside vendors and are Y2K compliant. Harmonic is in the process of upgrading internal systems that are not currently Y2K compliant, and expects to have this process completed during the third quarter of 1999. To date, Y2K costs have not been material to Harmonic and Harmonic does not expect that its $Y 2 K$ costs will exceed $\$ 100,000$ in the future. Harmonic currently does not have a contingency plan to address Y2K issues related to its products and internal systems, but will develop a contingency plan by the end of the third quarter of 1999 if its products and internal systems are not yet Y2K compliant. In addition, Harmonic is working with its suppliers and business partners to identify at what stage they are in the process of identifying and addressing the $Y 2 K$ issue and to assess the resulting risks and develop appropriate contingency plans. Harmonic will continue to perform compliance reviews and tests to ensure compliance on an ongoing basis. Harmonic currently does not anticipate that the cost of its Y2K program will be material to its financial condition and results of operations.

Although Harmonic has established and commenced its program to address Y 2 K issues, the failure of Harmonic products to operate properly with regard to the Y2K requirements could (a) cause Harmonic to incur unanticipated expenses to remedy any problems, (b) cause a reduction in sales and (c) expose Harmonic to related litigation by its customers, each of which could harm our business, operating results and financial condition. In addition, Harmonic and third parties with whom it conducts business may utilize equipment or software that may not be Y2K compliant. Failure of Harmonic's or any such third party's equipment or software to operate properly with regard to the Y2K requirements could cause, among other things, Harmonic or any such third party to incur unanticipated expenses or efforts to remedy any problems, which could have a material adverse effect on its or their respective business, operating results and financial condition. Furthermore, the purchasing patterns of customers or potential customers may be affected by $Y 2 K$ issues as companies expend significant resources to evaluate and to correct their equipment or software for Y2K compliance and as they simultaneously evaluate the preparedness of the third parties with whom they deal. These expenditures may result in reduced funds available to purchase products and services such as those offered by Harmonic, which could have a material adverse effect on Harmonic business, operating results and financial condition.

## FACTORS THAT MAY AFFECT FUTURE RESULTS OF OPERATIONS

Our operating results are likely to fluctuate significantly and may fail to meet or exceed the expectations of securities analysts or investors, causing our stock price to decline.

Our operating results have fluctuated in the past and are likely to continue to fluctuate in the future, on an annual and a quarterly basis, as a result of several factors, many of which are outside of our control. Some of the factors that may cause these fluctuations include:

```
- the level of capital spending of our customers, both in the U.S.
    and in foreign markets;
- changes in market demand;
- the timing and amount of customer orders;
- competitive market conditions;
- our unpredictable sales cycles;
```

- new product introductions by our competitors or by us;
- changes in domestic and international regulatory environments;
- market acceptance of new or existing products;
- the cost and availability of components, subassemblies and modules;
- the mix of our customer base and sales channels;
- the mix of our products sold;
- our development of custom products;
- the level of international sales; and
- economic conditions specific to the cable television industry and general economic conditions.

In addition, we often recognize a substantial portion of our revenues in the last month of the quarter. We establish our expenditure levels for product development and other operating expenses based on projected sales levels, and expenses are relatively fixed in the short term. Accordingly, variations in timing of sales can cause significant fluctuations in operating results. In addition, because a significant portion of our business is derived from orders placed by a limited number of large customers, the timing of such orders can also cause significant fluctuations in our operating results. Our expenses for any given quarter are typically based on expected sales

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and if sales are below expectations in any given quarter, the adverse impact of the shortfall on our operating results may be magnified by our inability to adjust spending to compensate for the shortfall. As a result of all these factors, our operating results in one or more future periods may fail to meet or exceed the expectations of securities analysts or investors. In that event, the trading price of our common stock would likely decline.

We depend on cable industry capital spending for substantially all of our revenue.

Almost all of our sales have been derived, directly or indirectly, from sales to cable television operators and we expect these sales to constitute a substantial majority for the foreseeable future. Demand for our products depends to a significant extent upon the magnitude and timing of capital spending by cable television operators for constructing, rebuilding or upgrading their systems. The capital spending patterns of cable television operators are dependent on a variety of factors, including:

```
- access to financing;
- cable television operators' annual budget cycles;
- the status of federal, local and foreign government regulation
    of telecommunications and television broadcasting;
- overall demand for cable television services and the acceptance
    of new broadband services;
- competitive pressures (including the availability of alternative
    video delivery technologies such as satellite broadcasting); and
- discretionary customer spending patterns and general economic
    conditions.
```

Our net sales in the second half of 1997 and the first quarter of 1998 were negatively affected by a slow-down in spending by cable television operators in the U.S. and in foreign markets. The factors contributing to this slow-down in capital spending included:

```
- consolidation and system exchanges by our domestic cable
    customers, which generally have had the initial effect of
    delaying certain system upgrades;
- uncertainty related to development of digital video and cable
    modem industry standards;
```

$$
\begin{aligned}
& \text { - delays associated with the evaluation of new services and system } \\
& \text { architectures by many cable television operators; } \\
& \text { - emphasis on marketing and customer service strategies by some } \\
& \text { international cable television operators instead of construction } \\
& \text { of networks; and } \\
& \text { - general economic conditions in international markets. }
\end{aligned}
$$

While our net sales increased during the last four quarters from the level achieved in the first quarter of 1998 due to increased spending in the North American cable television industry, spending by cable television operators outside of North America generally remained weak. We cannot predict when cable television spending outside of North America will increase and whether North American cable television spending will continue to grow. In addition, cable television capital spending can be subject to the effects of seasonality, with fewer construction and upgrade projects typically occurring in winter months and otherwise being affected by inclement weather.

Our customer base is concentrated and the loss of one or more of our key customers would harm our business.

Historically, a significant majority of our sales have been to relatively few customers. Sales to our ten largest customers in 1996, 1997 and 1998 and the first quarter of 1999 accounted for approximately $72 \%$, 56\%, 66\% and 77\%, respectively, of net sales. Due in part to the consolidation of ownership of domestic cable television systems, we expect that sales to relatively few customers will continue to account for a significant percentage of our net sales for the foreseeable future. For example, in the second half of 1998 and first quarter of 1999 , sales to TeleCommunications, Inc., or TCI, which was recently acquired by AT\&T, represented approximately $23 \%$ and $22 \%$ respectively, of our net sales. In addition, in 1998 sales to a Chinese distributor represented approximately 11\% of our net sales and in the first quarter of 1999 sales to our Canadian distributor represented approximately $14 \%$ of our net sales. Almost all of our sales are made on a purchase order basis, and none of our customers has entered into a long-term agreement requiring it to purchase our products. The loss of, or any reduction in orders from, a significant customer would harm our business.

We depend on our international sales and are subject to the risks associated with international operations.

Sales to customers outside of the United States in 1997, 1998 and the first quarter of 1999 represented $59 \%$, $43 \%$ and $42 \%$ of net sales, respectively, and we expect that international sales will continue to represent a substantial portion of our net sales for the foreseeable future. Our international operations are subject to a number of risks, including:

| - | changes in foreign government regulations and telecommunications standards; |
| :---: | :---: |
| - | import and export license requirements, tariffs, taxes and other trade barriers; |
| - | fluctuations in currency exchange rates; |
| - | difficulty in collecting accounts receivable; |
| - | the burden of complying with a wide variety of foreign laws, treaties and technical standards; |
| - | difficulty in staffing and managing foreign operations; and |
| - | political and economic instability. |

While our international sales are typically denominated in U.S. dollars, fluctuations in currency exchange rates could cause our products to become relatively more expensive to customers in a particular country, leading to a reduction in sales or profitability in that country. We do not currently engage
in any foreign currency hedging transactions. Gains and losses on the conversion to U.S. dollars of accounts receivable, accounts payable and other monetary assets and liabilities arising from international operations may contribute to fluctuations in operating results. Furthermore, payment cycles for international customers are typically longer than those for customers in the United States. Unpredictable sales cycles could cause us to fail to meet or exceed the expectations of security analysts and investors for any given period. Further, we cannot assure you that foreign markets will continue to develop.

In recent periods, certain Asian and Latin American currencies have devalued significantly in relation to the U.S. dollar. We believe that financial developments in Asia and Latin America were a major factor contributing to lower international net sales in fiscal 1998 as compared to fiscal 1997. In addition, the uncertain financial situation in Asia has placed financial pressure on some of our distributors. In response, we increased accounts receivable reserves in the first quarter of 1998. We are continuing to evaluate the effect on our business of recent financial developments in Asia and Latin America. Given the current economic uncertainties in China and throughout Asia, we cannot assure you that shipment of orders to Asia, including China, will be made as scheduled, or at all. We cannot assure you that our sales and collection cycles in Asia and Latin America will not continue to be harmed by the uncertain financial climate. In particular, the Company cannot predict the effect on its business, if any, of recent tensions between the U.S. and China resulting from the NATO bombing of the Chinese embassy in Belgrade.

We must be able to manage expenses and inventory risks associated with meeting the demand of our customers.

From time to time, we receive indications from our customers as to their future plans and requirements to ensure that we will be prepared to meet their demand for our products. In the past, however, we have received such indications but, on occasion, we did not ultimately receive purchase orders for our products. We must be able to effectively manage expenses and inventory risks associated with meeting potential demand for our products. In addition, if we fail to meet customers' supply expectations, we may lose business from such customers. If we expend resources and purchase materials to manufacture products and such products are not purchased, our business and operating results could suffer.

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The market in which we operate is intensely competitive and many of our competitors are larger and more established.

The market for cable television transmission equipment is extremely competitive and has been characterized by rapid technological change. Harmonic's current competitors include significantly larger corporations such as ADC
Telecommunications, ANTEC (a company owned in part by AT\&T), General Instrument, Philips and Scientific-Atlanta. Additional competition could come from new entrants in the broadband communications equipment market, such as Lucent Technologies. Most of these companies are substantially larger and have greater financial, technical, marketing and other resources than we do. Many of these large organizations are in a better position to withstand any significant reduction in capital spending by cable television operators. In addition, many of our competitors have more long standing and established relationships with domestic and foreign cable television operators than we do. We cannot assure you that we will be able to compete successfully in the future or that competition will not harm our business.

If any of our competitors' products or technologies were to become the industry standard or if any of our smaller competitors were to enter into or expand relationships with larger companies through mergers, acquisitions or otherwise, our business could be seriously harmed. Further, our competitors may bundle their products or incorporate functionality into existing products in a manner that discourages users from purchasing our products.

Broadband communications markets are relatively immature and characterized by rapid technological change.

Broadband communications markets are relatively immature, making it difficult to accurately predict the markets' future growth rate, size and technological direction. In view of the evolving nature of these markets, it is possible that
cable television operators, telephone companies or other suppliers of broadband wireless and satellite services will decide to adopt alternative architectures or technologies that are incompatible with our current or future products. If we are unable to design, develop, manufacture and sell products that incorporate or are compatible with these new architectures or technologies, our business would suffer.

We need to develop and introduce new and enhanced products in a timely manner to remain competitive.

Broadband communications markets are characterized by continuing technological advancement, changes in customer requirements and evolving industry standards. To compete successfully, we must design, develop, manufacture and sell new or enhanced products that provide increasingly higher levels of performance and reliability. However, we may not be able to successfully develop or introduce these products. Moreover, these products may not achieve broad commercial acceptance and may have lower gross margins than our other products.

In addition, to successfully develop and market our planned products for digital applications, we may be required to enter into technology development or licensing agreements with third parties. We cannot assure you that we will be able to enter into any necessary technology development or licensing agreement on terms acceptable to us, or at all. The failure to enter into technology development or licensing agreements when necessary could limit our ability to develop and market new products and, accordingly, could materially and adversely affect our business and operating results.

We need to effectively manage our growth.

The growth in Harmonic's business has placed, and is expected to continue to place, a significant strain on Harmonic's personnel, management and other resources. Harmonic's ability to manage any future growth effectively will require us to attract, train, motivate and manage new employees successfully, to integrate new employees into our overall operations, to retain key employees and to continue to improve our operational, financial and management systems. If we fail to manage our future growth effectively, our business could suffer.

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Competition for qualified personnel is intense, and we may not be successful in attracting and retaining personnel.

Our future success will depend, to a significant extent, on the ability of our management to operate effectively, both individually and as a group. We are dependent on our ability to retain and motivate high caliber personnel, in addition to attracting new personnel. Competition for qualified technical and other personnel is intense, particularly in the San Francisco Bay Area and Israel, and we may not be successful in attracting and retaining such personnel.

Competitors and others have in the past and may in the future attempt to recruit our employees. While our employees are required to sign standard agreements concerning confidentiality and ownership of inventions, we generally do not have employment contracts or noncompetition agreements with any of our personnel. The loss of the services of any of our key personnel, the inability to attract or retain qualified personnel in the future or delays in hiring required personnel, particularly engineers and other technical personnel, could negatively affect our business.

Our acquisition of NMC has created numerous risks and challenges for us.
The acquisition of N.M. New Media Communication Ltd. ("NMC"), which has recently changed its name to Harmonic Data Systems Ltd. ("HDS"), has placed, and is expected to continue to place, a significant strain on our personnel, management and other resources. The acquisition of NMC in January 1998 has allowed us to develop and expand our product offerings to include broadband high-speed data delivery hardware and software and increased the scope of our international operations in Israel. The acquisition of NMC continues to impose challenges, including:
wireless and satellite broadband services;

- difficulties in the assimilation of operations, research and
development efforts, products, personnel and cultures of
Harmonic and NMC;
- | our ability to successfully develop, manufacture and gain market |
| :--- |

acceptance of the products of NMC; and
the amortization of goodwill resulting from the acquisition of

We cannot assure you that we will be able to successfully address these challenges, and our failure to do so could materially and adversely affect our business, financial condition and operating results.

We may be subject to risks associated with acquisitions.

We have made and may make investments in complementary companies, products or technologies. If we make acquisitions, we could have difficulty assimilating or retaining the acquired companies' personnel and operations or integrating the acquired technology or products into ours. These difficulties could disrupt our ongoing business, distract our management and employees and increase our expenses. Moreover, our profitability may suffer because of acquisition-related costs or amortization costs for acquired goodwill and other intangible assets. Furthermore, we may have to incur debt or issue equity securities to pay for any future acquisitions, the issuance of which could be dilutive to our existing shareholders. If we are unable to successfully address any of these risks, our business, financial condition and operating results could be harmed.

If sales forecasted for a particular period are not realized in that period due to the unpredictable sales cycles of our products, our operating results for that period will be harmed.

The sales cycles of many of our products, particularly our newer products and products sold internationally, are typically unpredictable and usually involve:

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    - a significant technical evaluation;
    - a commitment of capital and other resources by cable and other
            network operators;
            - delays associated with cable and other network operators'
            internal procedures to approve large capital expenditures;
                    - time required to engineer the deployment of new technologies or
            services within broadband networks; and
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For these and other reasons, our sales cycles generally last three to six months, but can last up to 12 months. If orders forecasted for a specific customer for a particular quarter do not occur in that quarter, our operating results for that quarter could be substantially lower than anticipated.

Our failure to adequately protect our proprietary rights may adversely affect us.

We currently hold 12 issued United States patents and 9 issued foreign patents, and have a number of patent applications pending. Although we attempt to protect our intellectual property rights through patents, trademarks, copyrights, maintaining certain technology as trade secrets and other measures, we cannot assure you that any patent, trademark, copyright or other intellectual property right owned by us will not be invalidated, circumvented or challenged, that such intellectual property right will provide competitive advantages to us or that any of our pending or future patent applications will be issued with the scope of the claims sought by us, if at all. We cannot assure you that others will not develop technologies that are similar or superior to our technology, duplicate
our technology or design around the patents that we own. In addition, effective patent, copyright and trade secret protection may be unavailable or limited in certain foreign countries in which we do business or may do business in the future.

We believe that the future success of our business will depend on our ability to translate the technological expertise and innovation of our personnel into new and enhanced products. We generally enter into confidentiality or license agreements with our employees, consultants, vendors and customers as needed, and generally limit access to and distribution of our proprietary information. Nevertheless, we cannot assure you that the steps taken by us will prevent misappropriation of our technology. In addition, we have taken in the past, and may take in the future, legal action to enforce our patents and other intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement or invalidity. Such litigation could result in substantial costs and diversion of resources and could harm our business and operating results.

In order to successfully develop and market our planned products for digital applications, we may be required to enter into technology development or licensing agreements with third parties. Although many companies are often willing to enter into such technology development or licensing agreements, we cannot assure you that such agreements will be negotiated on terms acceptable to us, or at all. The failure to enter into technology development or licensing agreements, when necessary, could limit our ability to develop and market new products and could cause our business to suffer.

As is common in our industry, we have from time to time received notification from other companies of intellectual property rights held by those companies upon which our products may infringe. Any claim or litigation, with or without merit, could be costly, time consuming and could result in a diversion of management's attention, which could harm our business. If we were found to be infringing on the intellectual property rights of any third party, we could be subject to liabilities for such infringement, which could be material, and could be required to seek licenses from other companies or to refrain from using, manufacturing or selling certain products or using certain processes. Although holders of patents and other intellectual property rights often offer licenses to their patent or other intellectual property rights, we cannot assure you that licenses would be offered, that the terms of any offered license would be acceptable to us or that failure to obtain a license would not cause our operating results to suffer.

We may need additional capital in the future and may not be able to secure adequate funds on terms acceptable to us.

We currently anticipate that our existing cash balances and available line of credit and cash flow expected to be generated from future operations, will be sufficient to meet our liquidity needs for at least the next twelve months. However, we may need to raise additional funds if our estimates change or prove inaccurate or in order for us to respond to unforeseen technological or marketing hurdles or to take advantage of unanticipated opportunities.

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In addition, we expect to review potential acquisitions that would complement our existing product offerings or enhance our technical capabilities. While we have no current agreements or negotiations underway with respect to any potential acquisition, any future transaction of this nature could require potentially significant amounts of capital. Funds may not be available at the time or times needed, or available on terms acceptable to us. If adequate funds are not available, or are not available on acceptable terms, we may not be able to take advantage of market opportunities, to develop new products or to otherwise respond to competitive pressures.

We purchase several key components, subassemblies and modules used in the manufacture or integration of our products from sole or limited sources, and we are increasingly dependent on contract manufacturers.

Many components, subassemblies and modules necessary for the manufacture or integration of our products are obtained from a sole supplier or a limited group
of suppliers. Our reliance on sole or limited suppliers, particularly foreign suppliers, and our increasing reliance on subcontractors involves several risks, including a potential inability to obtain an adequate supply of required components, subassemblies or modules and reduced control over pricing, quality and timely delivery of components, subassemblies or modules. Certain key elements of our digital headend products are provided by a sole foreign supplier. We do not generally maintain long-term agreements with any of our suppliers or subcontractors. An inability to obtain adequate deliveries or any other circumstance that would require us to seek alternative sources of supply could affect our ability to ship our products on a timely basis, which could damage relationships with current and prospective customers and harm our business. We attempt to limit this risk by maintaining safety stocks of these components, subassemblies and modules. As a result of this investment in inventories, we may be subject to an increasing risk of inventory obsolescence in the future, which could harm our business.

We face risks associated with having important facilities and resources located in Israel.

Harmonic maintains two facilities in the State of Israel with a total of approximately 60 employees. The personnel at these facilities represent a significant portion of our research and development operations. Accordingly, we are directly influenced by the political, economic and military conditions affecting Israel, and any major hostilities involving Israel or the interruption or curtailment of trade between Israel and its present trading partners could significantly harm our business.

In addition, most of our employees in Israel are currently obligated to perform annual reserve duty in the Israel Defense Forces and are subject to being called for active military duty at any time. We cannot predict the effect of these obligations on Harmonic in the future.

Our business could be adversely impacted by Year 2000 compliance issues.
During the next year, many software programs may not recognize calendar dates beginning in the year 2000. This problem could force computers or machines which utilize date dependent software to either shut down or provide incorrect information. To address this problem, we have examined our computer and information systems, contacted our software and hardware providers, and, where necessary, made upgrades to our systems.

Based upon the assessments to date, all hardware products currently under development or released, and all software products currently under development are Y2K compliant. Certain software products currently installed at customer sites are not Y2K compliant and Harmonic is working with its customers to provide migration paths for each product. Undetected errors or defects may remain. Disruptions to our business or unexpected costs may arise because of undetected errors or defects in the technology used in our products, manufacturing processes or internal information systems, which are comprised predominantly of third party software and hardware. If we, or any of our key suppliers or customers, fail to mitigate internal and external Year 2000 risks, we may temporarily be unable to process transactions, manufacture products, send invoices or engage in similar normal business activities or we may experience a decline in sales, which could materially and adversely affect our business, financial condition and results of operations.

## ITEM 5. OTHER INFORMATION

Pursuant to Rule 14a-4(c)(1) under the Securities Exchange Act of 1934, the proxies provided to management shall confer on management discretionary authority to vote with respect to any non Rule $14 a-8$ stockholder proposals raised at the Company's annual meeting of stockholders, without any discussion of the matter in the proxy statement, unless a stockholder has notified the Company of such a proposal at least 45 days prior to the month and day on which the Company mailed its prior year's proxy statement. Since the Company mailed its proxy statement for the 1999 annual meeting of stockholders on April 12, 1999, the deadline for receipt of any such
stockholder proposal for the 2000 annual meeting of stockholders is
February 26, 20000 .

ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K
A. Exhibits

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Exhibit # Description of Document
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27.1 Financial Data Schedule
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B. Reports on Form 8-K

In a Report on Form $8-K$ dated March 24, 1999, Harmonic announced the merger of its subsidiary with and into Harmonic pursuant to which Harmonic changed its corporate name from Harmonic Lightwaves, Inc. to Harmonic Inc.

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SIGNATURE

Pursuant to the requirements 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.

Dated: May 17, 1999

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HARMONIC INC.
(Registrant)
By: /s/ Robin N. Dickson
        Robin N. Dickson
        Chief Financial Officer
        (Principal Financial and Accounting Officer)
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HARMONIC INC.
Index to Exhibits

EXHIBIT NO.
DESCRIPTION OF DOCUMENT

- -----------------------------------
27.1

Financial Data Schedule
<ARTICLE> 5
<MULTIPLIER> 1


