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SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

**FORM 8-K**

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the  
Securities Exchange Act of 1934

**Date of Report:**

**July 23, 2002**  
**(Date of earliest event reported)**

**HARMONIC INC.**

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**(Exact name of registrant as specified in its charter)**

**Delaware**

**000-25826**

**77-0201147**

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**(State or Other Jurisdiction of  
Incorporation or Organization)**

**(Commission File Number)**

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

**549 Baltic Way  
Sunnyvale, CA 94089  
(408) 542-2500**

**(Address including zip code, and telephone number, including  
area code, of Registrant's of principal executive offices)**

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ITEM 5. OTHER EVENTS

On July 23, 2002, Harmonic Inc. (the "Company") declared a dividend of one (1) Preferred Share Purchase Right (collectively, the "Rights") on each share of Common Stock, par value \$0.001 per share, of the Company ("Company Common Stock") outstanding as of the close of business on August 7, 2002. The terms of the Rights are governed by a Preferred Stock Rights Agreement, dated as of July 24, 2002 (the "Rights Agreement"), between the Company and Mellon Investor Services LLC, a copy of which is attached as an exhibit to this Current Report on Form 8-K and is incorporated herein by reference.

On July 24, 2002, the Company issued a press release announcing that the Company had approved adoption of the Rights Agreement. In connection with the Company's adoption of the Rights Agreement and a general anti-takeover analysis performed by the Company's Board of Directors, the Company amended and restated its bylaws. The press release and the Amended and Restated Bylaws of the Company are attached as exhibits to this Current Report on Form 8-K and are incorporated herein by reference.

ITEM 7. FINANCIAL STATEMENTS AND EXHIBITS

(c) Exhibits:

- 3.1 Amended and Restated Bylaws of Harmonic Inc.
- 3.2 Certificate of Designation of Rights, Preferences and Privileges of Series A Participating Preferred Stock of Harmonic Inc.
- 4.1 Preferred Stock Rights Agreement, dated as of July 24, 2002, between Harmonic Inc., a Delaware corporation, and Mellon Investor Services LLC.
- 99.1 Press release of Harmonic Inc. issued on July 24, 2002.

SIGNATURE

Pursuant to the requirements of the Securities and Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

HARMONIC INC.

Date: July 25, 2002

By:           /s/ Robin N. Dickson          

Name: Robin N. Dickson  
Title: Chief Financial Officer

EXHIBIT INDEX

Exhibit  
Number

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AMENDED AND RESTATED  
 BYLAWS  
 OF  
 HARMONIC INC.  
 (A DELAWARE CORPORATION)

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BYLAWS  
OF  
HARMONIC, INC.  
(A DELAWARE CORPORATION)

ARTICLE I  
CORPORATE OFFICES

1.1 REGISTERED OFFICE

The registered office of the corporation shall be fixed in the certificate of incorporation of the corporation.

1.2 OTHER OFFICES

The board of directors may at any time establish branch or subordinate offices at any place or places where the corporation is qualified to do business.

ARTICLE II  
MEETINGS OF STOCKHOLDERS

2.1 PLACE OF MEETINGS

Meetings of stockholders shall be held at any place within or outside the State of Delaware designated by the board of directors. In the absence of any such designation, stockholders' meetings shall be held at the principal executive office of the corporation.

2.2 ANNUAL MEETING

The annual meeting of stockholders shall be held each year on a date and at a time designated by the board of directors. In the absence of such designation, the annual meeting of stockholders shall be held on the first Tuesday in May in each year at 9:00 a.m. However, if such day falls on a legal holiday, then the meeting shall be held at the same time and place on the next succeeding full business day. At the meeting, directors shall be elected, and any other proper business may be transacted.

2.3 SPECIAL MEETING

A special meeting of the stockholders may be called at any time by the board of directors, the chairman of the board of directors, or by the president, but such special meetings may not be called by any other person or persons except as otherwise required by General Corporation Law of Delaware or Section 3.4 herein. Only such business shall be considered at a special meeting of stockholders as shall have been stated in the notice for such meeting.

2.4 NOTICE OF STOCKHOLDERS' MEETINGS

All notices of meetings of stockholders shall be sent or otherwise given in accordance with Section 2.5 of these bylaws not less than ten (10) nor more than sixty (60) days before the date of the meeting. The notice shall specify the

place, date and hour of the meeting and (i) in the case of a special meeting, the purpose or purposes for which the meeting is called (no business other than that specified in the notice may be transacted) or (ii) in the case of the annual meeting, those matters which the board of directors, at the time of giving the notice, intends to present for action by the stockholders (but any proper matter may be presented at the meeting for such action). The notice of any meeting at which directors are to be elected shall include the name of any nominee or nominees who, at the time of the notice, the board intends to present for election. Any previously scheduled meeting of the stockholders may be postponed, and (unless the certificate of incorporation otherwise provides) any special meeting of the stockholders may be cancelled, by resolution of the board of directors upon public notice given prior to the date previously scheduled for



such meeting of stockholders.

## 2.5 ADVANCE NOTICE OF STOCKHOLDER NOMINEES AND STOCKHOLDER BUSINESS

(a) To be properly brought before an annual meeting or special meeting, nominations for the election of directors or other business must be (i) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the board of directors, (ii) otherwise properly brought before the meeting by or at the direction of the board of directors or (iii) otherwise properly brought before the meeting by a stockholder. Except as otherwise required by General Corporation Law of Delaware or Section 3.4 herein, stockholders may not bring business before a special meeting of stockholders.

(b) For business to be properly brought before an annual meeting by a stockholder, the stockholder must have given timely notice thereof in writing to the Secretary of the corporation. To be timely, a stockholder's notice must be delivered to or mailed and received at the principal executive offices of the corporation not less than one hundred twenty (120) calendar days in advance of the date specified in the corporation's proxy statement released to stockholders in connection with the previous year's annual meeting of stockholders; provided, however, that in the event that no annual meeting was held in the previous year or the date of the annual meeting has been changed by more than thirty (30) days from the date contemplated at the time of the previous year's proxy statement, notice by the stockholder to be timely must be so received a reasonable time before the solicitation is made. A stockholder's notice to the Secretary shall set forth as to each matter the stockholder proposes to bring before the annual meeting: (i) a brief description of the business desired to be brought before the annual meeting and the reasons for conducting such business at the annual meeting, (ii) the name and address, as they appear on the corporation's books, of the stockholder proposing such business, (iii) the class and number of shares of the corporation which are beneficially owned by the stockholder, (iv) any material interest of the stockholder in such business and (v) any other information that is required to be provided by the stockholder pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), in his capacity as a proponent to a stockholder proposal. Notwithstanding the foregoing, in order to include information with respect to a stockholder proposal in the proxy statement and form of proxy for a stockholder's meeting, stockholders must provide notice as required by the regulations promulgated under the Exchange Act and must otherwise comply with the Exchange Act and the regulations promulgated thereunder with respect to such stockholder proposal. Notwithstanding anything in these bylaws to the contrary, no business shall be conducted at any annual meeting except in accordance with the procedures set forth in this Section 2.5. The chairman of the annual meeting shall, if the facts warrant, determine and declare at the meeting that business was not properly brought before the meeting and in accordance with the provisions of this Section 2.5, and, if he should so determine, he shall so declare at the meeting that any such business not properly brought before the meeting shall not be transacted.

(c) Only persons who are nominated in accordance with the procedures set forth in this paragraph (c) shall be eligible for election as directors. Nominations of persons for election to the board of directors of the corporation may be made at an annual meeting of stockholders by or at the direction of the board of directors or by any stockholder of the corporation entitled to vote in the election of directors at the meeting who complies with the notice procedures set forth in this paragraph (c). Such nominations, other than those made by or at the direction of the board of directors, shall be made pursuant to timely notice in writing to the Secretary of the corporation in accordance with the provisions of paragraph (b) of this Section 2.5. Nominations of persons for election to the board of directors of the corporation may be made at a special meeting of stockholders by a stockholder (if the business to be conducted at such meeting, as specified in the notice described in Section 2.4(i), includes the election of directors) if the notice required by this paragraph (c) shall be delivered to the Secretary of the corporation not later than the close of business on

the later of the 90th day prior to such special meeting or the 10th day following the day on which public announcement is first made of the date of the special meeting and of the nominees proposed by the board of directors to be elected at such meeting. For the purposes of this Section 2.5, and Section 2.8

herein, a "public announcement" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or a comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission. A stockholder's notice delivered pursuant to this Section 2.5 shall set forth (i) as to each person, if any, whom the stockholder proposes to nominate for election or re-election as a director: (A) the name, age, business address and residence address of such person, (B) the principal occupation or employment of such person, (C) the class and number of shares of the corporation which are beneficially owned by such person, (D) a description of all arrangements or understandings between the stockholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nominations are to be made by the stockholder and (E) any other information relating to such person that is required to be disclosed in solicitations of proxies for elections of directors, or is otherwise required, in each case pursuant to Regulation 14A under the Exchange Act (including without limitation such person's written consent to being named in the proxy statement, if any, as a nominee and to serving as a director if elected); and (ii) as to such stockholder giving notice, the information required to be provided pursuant to paragraph (b) of this Section 2.5. At the request of the board of directors, any person nominated by a stockholder for election as a director shall furnish to the Secretary of the corporation that information required to be set forth in the stockholder's notice of nomination which pertains to the nominee. Stockholders nominating directors under 2.5(c) must also comply with all applicable requirements of the Exchange Act and the regulations promulgated thereunder with respect to such nominations. No person shall be eligible for election as a director of the corporation unless nominated in accordance with the procedures set forth in this paragraph (c). The chairman of the meeting shall, if the facts warrant, determine and declare at the meeting that a nomination was not made in accordance with the procedures prescribed by these bylaws, and if he should so determine, he shall so declare at the meeting, and the defective nomination shall be disregarded.

#### 2.6 MANNER OF GIVING NOTICE; AFFIDAVIT OF NOTICE

Written notice of any meeting of stockholders shall be given either personally or by first-class mail or by telegraphic or other written communication. Notices not personally delivered shall be sent charges prepaid and shall be addressed to the stockholder at the address of that stockholder appearing on the books of the corporation or given by the stockholder to the corporation for the purpose of notice. Notice shall be deemed to have been given at the time when delivered personally or deposited in the mail or sent by telegram or other means of written communication. If any notice addressed to a stockholder at the address of that stockholder appearing on the books of the corporation is returned to the corporation by the United States Postal Service marked to indicate that the United States Postal Service is unable to deliver the notice to the stockholder at that address, then all future notices or reports shall be deemed to have been duly given without further mailing if the same shall be available to the stockholder on written demand of the stockholder at the principal executive office of the corporation for a period of one (1) year from the date of the giving of the notice.

An affidavit of the mailing or other means of giving any notice of any stockholders' meeting, executed by the secretary, assistant secretary or any transfer agent of the corporation giving the notice, shall be prima facie evidence of the giving of such notice.

#### 2.7 QUORUM

The holders of a majority in voting power of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy at the meeting, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by statute or by the certificate of incorporation. If, however, such quorum is not present or represented at any meeting of the stockholders, then either (i) the chairman of the meeting or (ii) the holders of a majority of the shares represented at the meeting and entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting in accordance with Section 2.8 of these bylaws.

When a quorum is present at any meeting, the vote of the holders of a majority of the stock having voting power present in person or represented by proxy shall decide any question brought before such meeting, unless the question is one upon which, by express provision of the laws of the State of Delaware or of the certificate of incorporation or these

bylaws, a different vote is required, in which case such express provision shall govern and control the decision of the question.

If a quorum be initially present, the stockholders may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum, if any action taken is approved by a majority of the stockholders initially constituting the quorum.

#### 2.8 ADJOURNED MEETING; NOTICE

Any stockholders' meeting, annual or special, whether or not a quorum is present, may be adjourned from time to time by (i) the chairman of the meeting or (ii) the stockholders by the vote of the holders of a majority of the shares represented at that meeting and entitled to vote thereat, either in person or by proxy. In the absence of a quorum, no other business may be transacted at that meeting except as provided in Section 2.7 of these bylaws.

When a meeting is adjourned to another time and place, unless these bylaws otherwise require, notice need not be given of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. In no event shall the public announcement of an adjournment of a stockholders meeting commence a new time period for the giving of a stockholder's notice as described in Section 2.5(b) or 2.5(c) herein. At the adjourned meeting the corporation may transact any business that might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

#### 2.9 VOTING

The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Section 2.12 of these bylaws, subject to the provisions of Sections 217 and 218 of the General Corporation Law of Delaware (relating to voting rights of fiduciaries, pledgors and joint owners, and to voting trusts and other voting agreements).

Except as may be otherwise provided in the certificate of incorporation or these bylaws, each stockholder shall be entitled to one vote for each share of capital stock held by such stockholder. Any stockholder entitled to vote on any matter may vote part of the shares in favor of the proposal and refrain from voting the remaining shares or, except when the matter is the election of directors, may vote them against the proposal; but, if the stockholder fails to specify the number of shares which the stockholder is voting affirmatively, it will be conclusively presumed that the stockholder's approving vote is with respect to all shares which the stockholder is entitled to vote.

#### 2.10 VALIDATION OF MEETINGS; WAIVER OF NOTICE; CONSENT

The transactions of any meeting of stockholders, either annual or special, however called and noticed, and wherever held, shall be as valid as though they had been taken at a meeting duly held after regular call and notice, if a quorum be present either in person or by proxy, and if, either before or after the meeting, each person entitled to vote, who was not present in person or by proxy, signs a written waiver of notice or a consent to the holding of the meeting or an approval of the minutes thereof. The waiver of notice or consent or approval need not specify either the business to be transacted or the purpose of any annual or special meeting of stockholders. All such waivers, consents, and approvals shall be filed with the corporate records or made a part of the minutes of the meeting.

Attendance by a person at a meeting shall also constitute a waiver of notice of and presence at that meeting, except when the person objects at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened. Attendance at a meeting is not a waiver of any right to object to the consideration of matters required by law to be included in the notice of the meeting but not so included, if that objection is expressly made at the meeting.

## 2.11 STOCKHOLDER ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Any action required or permitted to be taken at any annual or special meeting of stockholders may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing setting forth the action so taken shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Such consents shall be delivered to the corporation by delivery to its registered office in the state of Delaware, its principal place of business, or an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Delivery made to a corporation's registered office shall be by hand or by certified or registered mail, return receipt requested.

## 2.12 RECORD DATE FOR STOCKHOLDER NOTICE; VOTING

For purposes of determining the stockholders entitled to notice of any meeting or to vote thereat or entitled to give consent to corporate action without a meeting, the board of directors may fix, in advance, a record date, which shall not precede the date upon which the resolution fixing the record date is adopted by the board of directors and which shall not be more than sixty (60) days nor less than ten (10) days before the date of any such meeting, and in such event only stockholders of record on the date so fixed are entitled to notice and to vote, notwithstanding any transfer of any shares on the books of the corporation after the record date.

If the board of directors does not so fix a record date:

(a) the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the business day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the business day next preceding the day on which the meeting is held; and

(b) the record date for determining stockholders entitled to give consent to corporate action in writing without a meeting, (i) when no prior action by the board is required, shall be the day on which the first written consent is delivered to the corporation as provided in Section 2.3(b) of the General Corporation Law of Delaware, or (ii) when prior action by the board is required, shall be at the close of business on the day on which the board adopts the resolution relating to that action.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting unless the board of directors fixes a new record date for the adjourned meeting, but the board of directors shall fix a new record date if the meeting is adjourned for more than thirty (30) days from the date set for the original meeting.

The record date for any other purpose shall be as provided in Section 8.1 of these bylaws.

## 2.13 PROXIES

Every person entitled to vote for directors, or on any other matter, shall have the right to do so either in person or by one or more agents authorized by a written proxy signed by the person and filed with the secretary of the corporation, but no such proxy shall be voted or acted upon after three (3) years from its date, unless the proxy provides for a longer period. A proxy shall be deemed signed if the stockholder's name is placed on the proxy (whether by manual signature, typewriting, telegraphic transmission, telefacsimile or otherwise) by the stockholder or the stockholder's attorney-in-fact. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212(e) of the General Corporation Law of Delaware.

## 2.14 ORGANIZATION

The president, or in the absence of the president, the chairman of the board, shall call the meeting of the stockholders to order, and shall act as chairman of the meeting. In the absence of the president, the chairman of the board, and all of the vice presidents, the stockholders shall appoint a chairman for such meeting. The chairman of any meeting of stockholders shall determine the order of business and the procedures at the meeting, including such matters as the regulation of the manner of voting and the conduct of business. The secretary of the corporation shall act as secretary of all meetings of the stockholders, but in the absence of the secretary at any meeting of the stockholders, the chairman of the meeting may appoint any person to act as secretary of the meeting.

## 2.15 LIST OF STOCKHOLDERS ENTITLED TO VOTE

The officer who has charge of the stock ledger of the corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten (10) days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present.

## 2.16 INSPECTORS OF ELECTION

Before any meeting of stockholders, the board of directors may appoint an inspector or inspectors of election to act at the meeting or its adjournment. If no inspector of election is so appointed, then the chairman of the meeting may, and on the request of any stockholder or a stockholder's proxy shall, appoint an inspector or inspectors of election to act at the meeting. The number of inspectors shall be either one (1) or three (3). If inspectors are appointed at a meeting pursuant to the request of one (1) or more stockholders or proxies, then the holders of a majority of shares or their proxies present at the meeting shall determine whether one (1) or three (3) inspectors are to be appointed. If any person appointed as inspector fails to appear or fails or refuses to act, then the chairman of the meeting may, and upon the request of any stockholder or a stockholder's proxy shall, appoint a person to fill that vacancy.

Such inspectors shall:

(a) determine the number of shares outstanding and the voting power of each, the number of shares represented at the meeting, the existence of a quorum, and the authenticity, validity, and effect of proxies;

(b) receive votes, ballots or consents;

(c) hear and determine all challenges and questions in any way arising in connection with the right to vote;

(d) count and tabulate all votes or consents;

(e) determine when the polls shall close;

(f) determine the result; and

(g) do any other acts that may be proper to conduct the election or vote with fairness to all stockholders.

## ARTICLE III

### DIRECTORS

## 3.1 POWERS

Subject to the provisions of the General Corporation Law of Delaware and to any limitations in the certificate of incorporation or these bylaws relating to action required to be approved by the stockholders or by the outstanding shares, the business and affairs of the corporation shall be managed and shall be exercised by or under the direction of the board of directors. In addition to the powers and authorities these bylaws expressly confer upon them, the board of directors may exercise all such powers of the corporation and do all such lawful acts and things as are not by the General Corporation Law of Delaware or by the certificate of incorporation or by these bylaws required to be exercised or done by the stockholders.

### 3.2 NUMBER OF DIRECTORS

The board of directors shall consist of six (6) members. The number of directors may be changed by an amendment to this bylaw, duly adopted by the board of directors or by the stockholders, or by a duly adopted amendment to the certificate of incorporation. No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires. If for any cause, the directors shall not have been elected at an annual meeting, they may be elected as soon thereafter as convenient at a special meeting of the stockholders called for that purpose in the manner provided in these Bylaws.

### 3.3 ELECTION AND TERM OF OFFICE OF DIRECTORS

Except as provided in Section 3.4 of these bylaws, directors shall be elected at each annual meeting of stockholders to hold office until the next annual meeting. Each director, including a director elected or appointed to fill a vacancy, shall hold office until the expiration of the term for which elected and until such director's successor has been elected and qualified or until such director's earlier resignation or removal.

### 3.4 RESIGNATION AND VACANCIES

Any director may resign effective on giving written notice to the chairman of the board, the president, the secretary or the board of directors, unless the notice specifies a later time for that resignation to become effective. If the resignation of a director is effective at a future time, the board of directors may elect a successor to take office when the resignation becomes effective.

Vacancies in the board of directors may be filled by a majority of the remaining directors, even if less than a quorum, or by a sole remaining director; however, a vacancy created by the removal of a director by the vote of the stockholders or by court order may be filled only by the affirmative vote of a majority of the shares represented and voting at a duly held meeting at which a quorum is present (which shares voting affirmatively also constitute a majority of the required quorum). Each director so elected shall hold office until the next annual meeting of the stockholders and until a successor has been elected and qualified.

Unless otherwise provided in the certificate of incorporation or these bylaws:

(i) Vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having the right to vote as a single class may be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director.

(ii) Whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the certificate of incorporation, vacancies and newly created directorships of such

class or classes or series may be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected.

Any directors chosen pursuant to this Section 3.4 shall hold office for a term expiring at the next annual meeting of stockholders and until such director's successor shall have been duly elected and qualified.

If at any time, by reason of death or resignation or other cause, the corporation should have no directors in office, then any officer or any stockholder or an executor, administrator, trustee or guardian of a stockholder, or other fiduciary entrusted with like responsibility for the person or estate of a stockholder, may call a special meeting of stockholders in accordance with the provisions of the certificate of incorporation or these bylaws, or may apply to the Court of Chancery for a decree summarily ordering an election as provided in Section 211 of the General Corporation Law of Delaware.

If, at the time of filling any vacancy or any newly created directorship, the directors then in office constitute less than a majority of the whole board (as constituted immediately prior to any such increase), then the Court of Chancery may, upon application of any stockholder or stockholders holding at least ten percent (10%) of the total number of the shares at the time outstanding having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office as aforesaid, which election shall be governed by the provisions of Section 211 of the General Corporation Law of Delaware as far as applicable.

### 3.5 REMOVAL OF DIRECTORS

Unless otherwise restricted by statute, by the certificate of incorporation or by these bylaws, any director or the entire board of directors may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors; provided, however, that, if and so long as stockholders of the corporation are entitled to cumulative voting, if less than the entire board is to be removed, no director may be removed without cause if the votes cast against his removal would be sufficient to elect him if then cumulatively voted at an election of the entire board of directors.

### 3.6 PLACE OF MEETINGS; MEETINGS BY TELEPHONE

Regular meetings of the board of directors may be held at any place within or outside the State of Delaware that has been designated from time to time by resolution of the board. In the absence of such a designation, regular meetings shall be held at the principal executive office of the corporation. Special meetings of the board may be held at any place within or outside the State of Delaware that has been designated in the notice of the meeting or, if not stated in the notice or if there is no notice, at the principal executive office of the corporation.

Any meeting of the board, regular or special, may be held by conference telephone or similar communication equipment, so long as all directors participating in the meeting can hear one another; and all such participating directors shall be deemed to be present in person at the meeting.

### 3.7 FIRST MEETINGS

The first meeting of each newly elected board of directors shall be held at such time and place as shall be fixed by the vote of the stockholders at the annual meeting. In the event of the failure of the stockholders to fix the time or place of such first meeting of the newly elected board of directors, or in the event such meeting is not held at the time and place so fixed by the stockholders, the meeting may be held at such time and place as shall be specified in a notice given as hereinafter provided for special meetings of the board of directors, or as shall be specified in a written waiver signed by all of the directors.

### 3.8 REGULAR MEETINGS

Regular meetings of the board of directors may be held without notice at such time as shall from time to time be determined by the board of directors. If any regular meeting day shall fall on a legal holiday, then the meeting shall be

held at the same time and place on the next succeeding full business day.

### 3.9 SPECIAL MEETINGS; NOTICE

Special meetings of the board of directors for any purpose or purposes may be called at any time by the chairman of the board of directors, the president, any vice president, the secretary or any two directors.

The person or persons authorized to call special meetings of the board of directors may fix the time and place of the meetings. Notice of the time and place of special meetings shall be delivered personally or by telephone to each director or sent by first-class mail, courier service or telegram, telecopy or other electronic or wireless means, charges prepaid, addressed to each director at that director's address as it is shown on the records of the corporation. If the notice is by mail, such notice shall be deposited in the United States mail at least four (4) days before the time of the holding of the meeting. If the notice is by courier service, telegram, overnight mail, telecopy or other electronic or wireless means, such notice shall be deemed adequately delivered when the notice is transmitted at least twenty-four (24) hours prior to the time set for such meeting. If the notice is by telephone or by hand delivery, such notice shall be deemed adequately delivered when the notice is given at least twenty-four (24) hours prior to the time set for such meeting. Any oral notice given personally or by telephone may be communicated either to the director or to a person at the office of the director who the person giving the notice has reason to believe will promptly communicate it to the director. The notice need not specify the purpose or the place of the meeting, if the meeting is to be held at the principal executive office of the corporation.

### 3.10 QUORUM

A majority of the authorized number of directors shall constitute a quorum for the transaction of business, except to adjourn as provided in Section 3.12 of these bylaws. Every act or decision done or made by a majority of the directors present at a duly held meeting at which a quorum is present shall be regarded as the act of the board of directors, subject to the provisions of the certificate of incorporation and applicable law.

A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the quorum for that meeting.

### 3.11 WAIVER OF NOTICE

Notice of a meeting need not be given to any director (i) who signs a waiver of notice, whether before or after the meeting, or (ii) who attends the meeting without protesting, prior thereto or at its commencement, the lack of notice to such directors. All such waivers shall be filed with the corporate records or made part of the minutes of the meeting. A waiver of notice need not specify the purpose of any regular or special meeting of the board of directors.

### 3.12 ADJOURNMENT

A majority of the directors present, whether or not constituting a quorum, may adjourn any meeting of the board to another time and place.

### 3.13 NOTICE OF ADJOURNMENT

Notice of the time and place of holding an adjourned meeting of the board need not be given unless the meeting is adjourned for more than twenty-four (24) hours. If the meeting is adjourned for more than twenty-four (24) hours,

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then notice of the time and place of the adjourned meeting shall be given before the adjourned meeting takes place, in the manner specified in Section 3.9 of these bylaws, to the directors who were not present at the time of the adjournment.

### 3.14 BOARD ACTION BY WRITTEN CONSENT WITHOUT A MEETING

Any action required or permitted to be taken by the board of directors



may be taken without a meeting, provided that all members of the board individually or collectively consent in writing to that action. Such action by written consent shall have the same force and effect as a unanimous vote of the board of directors. Such written consent and any counterparts thereof shall be filed with the minutes of the proceedings of the board of directors.

### 3.15 FEES AND COMPENSATION OF DIRECTORS

Directors and members of committees may receive such compensation, if any, for their services and such reimbursement of expenses as may be fixed or determined by resolution of the board of directors. This Section 3.15 shall not be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee or otherwise and receiving compensation for those services.

### 3.16 APPROVAL OF LOANS TO OFFICERS

The corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the corporation or any of its subsidiaries, including any officer or employee who is a director of the corporation or any of its subsidiaries, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the corporation. The loan, guaranty or other assistance may be with or without interest and may be unsecured, or secured in such manner as the board of directors shall approve, including, without limitation, a pledge of shares of stock of the corporation. Nothing contained in this section shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the corporation at common law or under any statute.

### 3.17 SOLE DIRECTOR PROVIDED BY CERTIFICATE OF INCORPORATION

In the event only one director is required by these bylaws or the certificate of incorporation, then any reference herein to notices, waivers, consents, meetings or other actions by a majority or quorum of the directors shall be deemed to refer to such notice, waiver, etc., by such sole director, who shall have all the rights and duties and shall be entitled to exercise all of the powers and shall assume all the responsibilities otherwise herein described as given to the board of directors.

## ARTICLE IV

### COMMITTEES

#### 4.1 COMMITTEES OF DIRECTORS

The board of directors may, by resolution adopted by a majority of the authorized number of directors, designate one (1) or more committees, each consisting of two or more directors, to serve at the pleasure of the board. The board may designate one (1) or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. The appointment of members or alternate members of a committee requires the vote of a majority of the authorized number of directors. Any committee, to the extent provided in the resolution of the board, shall have and may exercise all the powers and authority of the board, but no such committee shall have the power or authority to (i) amend the certificate of incorporation (except that a committee may, to the extent authorized in the resolution or resolutions providing for the issuance of shares of stock adopted by the board of directors as provided in Section 151(a) of the General Corporation Law of Delaware, fix the designations and any of the preferences or rights of such shares relating to dividends, redemption, dissolution, any distribution of assets of the

corporation or the conversion into, or the exchange of such shares for, shares of any other class or classes or any other series of the same or any other class or classes of stock of the corporation), (ii) adopt an agreement of merger or consolidation under Sections 251 or 252 of the General Corporation Law of Delaware, (iii) recommend to the stockholders the sale, lease or exchange of all or substantially all of the corporation's property and assets, (iv) recommend to the stockholders a dissolution of the corporation or a revocation of a dissolution or (v) amend the bylaws of the corporation; and, unless the board

resolution establishing the committee, the bylaws or the certificate of incorporation expressly so provide, no such committee shall have the power or authority to declare a dividend, to authorize the issuance of stock, or to adopt a certificate of ownership and merger pursuant to Section 253 of the General Corporation Law of Delaware.

#### 4.2 MEETINGS AND ACTION OF COMMITTEES

Meetings and actions of committees shall be governed by, and held and taken in accordance with, the following provisions of Article III of these bylaws: Section 3.6 (place of meetings; meetings by telephone), Section 3.8 (regular meetings), Section 3.9 (special meetings; notice), Section 3.10 (quorum), Section 3.11 (waiver of notice), Section 3.12 (adjournment), Section 3.13 (notice of adjournment) and Section 3.14 (board action by written consent without meeting), with such changes in the context of those bylaws as are necessary to substitute the committee and its members for the board of directors and its members; provided, however, that the time of regular meetings of committees may be determined either by resolution of the board of directors or by resolution of the committee, that special meetings of committees may also be called by resolution of the board of directors, and that notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The board of directors may adopt rules for the government of any committee not inconsistent with the provisions of these bylaws.

#### 4.3 COMMITTEE MINUTES

Each committee shall keep regular minutes of its meetings and report the same to the board of directors when required.

### ARTICLE V

#### OFFICERS

##### 5.1 OFFICERS

The Corporate Officers of the corporation shall be a president, a secretary and a chief financial officer. The corporation may also have, at the discretion of the board of directors, a chairman of the board, one or more vice presidents (however denominated), one or more assistant secretaries, one or more assistant treasurers and such other officers as may be appointed in accordance with the provisions of Section 5.3 of these bylaws. Any number of offices may be held by the same person.

In addition to the Corporate Officers of the Company described above, there may also be such Administrative Officers of the corporation as may be designated and appointed from time to time by the president of the corporation in accordance with the provisions of Section 5.12 of these bylaws.

##### 5.2 ELECTION OF OFFICERS

The Corporate Officers of the corporation, except such officers as may be appointed in accordance with the provisions of Section 5.3 or Section 5.5 of these bylaws, shall be chosen by the board of directors, subject to the rights, if any, of an officer under any contract of employment, and shall hold their respective offices for such terms as the board of directors may from time to time determine.

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##### 5.3 SUBORDINATE OFFICERS

The board of directors may appoint, or may empower the president to appoint, such other Corporate Officers as the business of the corporation may require, each of whom shall hold office for such period, have such power and authority, and perform such duties as are provided in these bylaws or as the board of directors may from time to time determine.

The president may from time to time designate and appoint Administrative Officers of the corporation in accordance with the provisions of Section 5.12 of these bylaws.

#### 5.4 REMOVAL AND RESIGNATION OF OFFICERS

Subject to the rights, if any, of a Corporate Officer under any contract of employment, any Corporate Officer may be removed, either with or without cause, by the board of directors at any regular or special meeting of the board or, except in case of a Corporate Officer chosen by the board of directors, by any Corporate Officer upon whom such power of removal may be conferred by the board of directors.

Any Corporate Officer may resign at any time by giving written notice to the corporation. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice; and, unless otherwise specified in that notice, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the corporation under any contract to which the Corporate Officer is a party.

Any Administrative Officer designated and appointed by the president may be removed, either with or without cause, at any time by the president. Any Administrative Officer may resign at any time by giving written notice to the president or to the secretary of the corporation.

#### 5.5 VACANCIES IN OFFICES

A vacancy in any office because of death, resignation, removal, disqualification or any other cause shall be filled in the manner prescribed in these bylaws for regular appointments to that office.

#### 5.6 CHAIRMAN OF THE BOARD

The chairman of the board, if such an officer be elected, shall, if present, preside at meetings of the board of directors and exercise such other powers and perform such other duties as may from time to time be assigned to him by the board of directors or as may be prescribed by these bylaws. If there is no president, then the chairman of the board shall also be the chief executive officer of the corporation and shall have the powers and duties prescribed in Section 5.7 of these bylaws.

#### 5.7 PRESIDENT

Subject to such supervisory powers, if any, as may be given by the board of directors to the chairman of the board, if there be such an officer, the president shall be the chief executive officer of the corporation and shall, subject to the control of the board of directors, have general supervision, direction and control of the business and the officers of the corporation. He or she shall preside at all meetings of the stockholders and, in the absence or nonexistence of a chairman of the board, at all meetings of the board of directors. He or she shall have the general powers and duties of management usually vested in the office of president of a corporation, and shall have such other powers and perform such other duties as may be prescribed by the board of directors or these bylaws.

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#### 5.8 VICE PRESIDENTS

In the absence or disability of the president, and if there is no chairman of the board, the vice presidents, if any, in order of their rank as fixed by the board of directors or, if not ranked, a vice president designated by the board of directors, shall perform all the duties of the president and when so acting shall have all the powers of, and be subject to all the restrictions upon, the president. The vice presidents shall have such other powers and perform such other duties as from time to time may be prescribed for them respectively by the board of directors, these bylaws, the president or the chairman of the board.

#### 5.9 SECRETARY

The secretary shall keep or cause to be kept, at the principal executive office of the corporation or such other place as the board of directors may direct, a book of minutes of all meetings and actions of the board of directors, committees of directors and stockholders. The minutes shall show the time and

place of each meeting, whether regular or special (and, if special, how authorized and the notice given), the names of those present at directors' meetings or committee meetings, the number of shares present or represented at stockholders' meetings and the proceedings thereof.

The secretary shall keep, or cause to be kept, at the principal executive office of the corporation or at the office of the corporation's transfer agent or registrar, as determined by resolution of the board of directors, a share register or a duplicate share register, showing the names of all stockholders and their addresses, the number and classes of shares held by each, the number and date of certificates evidencing such shares and the number and date of cancellation of every certificate surrendered for cancellation.

The secretary shall give, or cause to be given, notice of all meetings of the stockholders and of the board of directors required to be given by law or by these bylaws. He or she shall keep the seal of the corporation, if one be adopted, in safe custody and shall have such other powers and perform such other duties as may be prescribed by the board of directors or by these bylaws.

#### 5.10 CHIEF FINANCIAL OFFICER

The chief financial officer shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of accounts of the properties and business transactions of the corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital, retained earnings and shares. The books of account shall at all reasonable times be open to inspection by any director for a purpose reasonably related to his position as a director.

The chief financial officer shall deposit all money and other valuables in the name and to the credit of the corporation with such depositories as may be designated by the board of directors. He or she shall disburse the funds of the corporation as may be ordered by the board of directors, shall render to the president and directors, whenever they request it, an account of all of his or her transactions as chief financial officer and of the financial condition of the corporation, and shall have such other powers and perform such other duties as may be prescribed by the board of directors or these bylaws.

#### 5.11 ASSISTANT SECRETARY

The assistant secretary, if any, or, if there is more than one, the assistant secretaries in the order determined by the board of directors (or if there be no such determination, then in the order of their election) shall, in the absence of the secretary or in the event of his or her inability or refusal to act, perform the duties and exercise the powers of the secretary and shall perform such other duties and have such other powers as the board of directors may from time to time prescribe.

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#### 5.12 ADMINISTRATIVE OFFICERS

In addition to the Corporate Officers of the corporation as provided in Section 5.1 of these bylaws and such subordinate Corporate Officers as may be appointed in accordance with Section 5.3 of these bylaws, there may also be such Administrative Officers of the corporation as may be designated and appointed from time to time by the president of the corporation. Administrative Officers shall perform such duties and have such powers as from time to time may be determined by the president or the board of directors in order to assist the Corporate Officers in the furtherance of their duties. In the performance of such duties and the exercise of such powers, however, such Administrative Officers shall have limited authority to act on behalf of the corporation as the board of directors shall establish, including but not limited to limitations on the dollar amount and on the scope of agreements or commitments that may be made by such Administrative Officers on behalf of the corporation, which limitations may not be exceeded by such individuals or altered by the president without further approval by the board of directors.

#### 5.13 AUTHORITY AND DUTIES OF OFFICERS

In addition to the foregoing powers, authority and duties, all officers of the corporation shall respectively have such authority and powers and perform

such duties in the management of the business of the corporation as may be designated from time to time by the board of directors.

## ARTICLE VI

### INDEMNIFICATION OF DIRECTORS, OFFICERS, EMPLOYEES AND OTHER AGENTS

#### 6.1 INDEMNIFICATION OF DIRECTORS AND OFFICERS

The corporation shall, to the maximum extent and in the manner permitted by the General Corporation Law of Delaware as the same now exists or may hereafter be amended, indemnify any person against expenses (including attorneys' fees), judgments, fines, and amounts paid in settlement actually and reasonably incurred in connection with any threatened, pending or completed action, suit, or proceeding in which such person was or is a party or is threatened to be made a party by reason of the fact that such person is or was a director or officer of the corporation. For purposes of this Section 6.1, a "director" or "officer" of the corporation shall mean any person (i) who is or was a director or officer of the corporation, (ii) who is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise or (iii) who was a director or officer of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation.

The corporation shall be required to indemnify a director or officer in connection with an action, suit, or proceeding (or part thereof) initiated by such director or officer only if the initiation of such action, suit, or proceeding (or part thereof) by the director or officer was authorized by the board of Directors of the corporation.

The corporation shall pay the expenses (including attorney's fees) incurred by a director or officer of the corporation entitled to indemnification hereunder in defending any action, suit or proceeding referred to in this Section 6.1 in advance of its final disposition; provided, however, that payment of expenses incurred by a director or officer of the corporation in advance of the final disposition of such action, suit or proceeding shall be made only upon receipt of an undertaking by the director or officer to repay all amounts advanced if it should ultimately be determined that the director or officer is not entitled to be indemnified under this Section 6.1 or otherwise.

The rights conferred on any person by this Article shall not be exclusive of any other rights which such person may have or hereafter acquire under any statute, provision of the corporation's certificate of incorporation, these bylaws, agreement, vote of the stockholders or disinterested directors or otherwise.

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Any repeal or modification of the foregoing provisions of this Article shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification.

#### 6.2 INDEMNIFICATION OF OTHERS

The corporation shall have the power, to the maximum extent and in the manner permitted by the General Corporation Law of Delaware as the same now exists or may hereafter be amended, to indemnify any person (other than directors and officers) against expenses (including attorneys' fees), judgments, fines, and amounts paid in settlement actually and reasonably incurred in connection with any threatened, pending or completed action, suit, or proceeding, in which such person was or is a party or is threatened to be made a party by reason of the fact that such person is or was an employee or agent of the corporation. For purposes of this Section 6.2, an "employee" or "agent" of the corporation (other than a director or officer) shall mean any person (i) who is or was an employee or agent of the corporation, (ii) who is or was serving at the request of the corporation as an employee or agent of another corporation, partnership, joint venture, trust or other enterprise or (iii) who was an employee or agent of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor

corporation.

### 6.3 INSURANCE

The corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him or her and incurred by him or her in any such capacity, or arising out of his or her status as such, whether or not the corporation would have the power to indemnify him or her against such liability under the provisions of the General Corporation Law of Delaware.

## ARTICLE VII

### RECORDS AND REPORTS

#### 7.1 MAINTENANCE AND INSPECTION OF RECORDS

The corporation shall, either at its principal executive office or at such place or places as designated by the board of directors, keep a record of its stockholders listing their names and addresses and the number and class of shares held by each stockholder, a copy of these bylaws as amended to date, accounting books and other records of its business and properties.

Any stockholder of record, in person or by attorney or other agent, shall, upon written demand under oath stating the purpose thereof, have the right during the usual hours for business to inspect for any proper purpose the corporation's stock ledger, a list of its stockholders, and its other books and records and to make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to such person's interest as a stockholder. In every instance where an attorney or other agent is the person who seeks the right to inspection, the demand under oath shall be accompanied by a power of attorney or such other writing that authorizes the attorney or other agent to so act on behalf of the stockholder. The demand under oath shall be directed to the corporation at its registered office in Delaware or at its principal place of business.

#### 7.2 INSPECTION BY DIRECTORS

Any director shall have the right to examine the corporation's stock ledger, a list of its stockholders and its other books and records for a purpose reasonably related to his or her position as a director.

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#### 7.3 ANNUAL STATEMENT TO STOCKHOLDERS

The board of directors shall present at each annual meeting, and at any special meeting of the stockholders when called for by vote of the stockholders, a full and clear statement of the business and condition of the corporation.

#### 7.4 REPRESENTATION OF SHARES OF OTHER CORPORATIONS

The chairman of the board, if any, the president, any vice president, the chief financial officer, the secretary or any assistant secretary of this corporation, or any other person authorized by the board of directors or the president or a vice president, is authorized to vote, represent and exercise on behalf of this corporation all rights incident to any and all shares of the stock of any other corporation or corporations standing in the name of this corporation. The authority herein granted may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

#### 7.5 CERTIFICATION AND INSPECTION OF BYLAWS

The original or a copy of these bylaws, as amended or otherwise altered to date, certified by the secretary, shall be kept at the corporation's principal executive office and shall be open to inspection by the stockholders of the corporation, at all reasonable times during office hours.

ARTICLE VIII

GENERAL MATTERS

8.1 RECORD DATE FOR PURPOSES OTHER THAN NOTICE AND VOTING

For purposes of determining the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the board of directors may fix, in advance, a record date, which shall not precede the date upon which the resolution fixing the record date is adopted and which shall not be more than sixty (60) days before any such action. In that case, only stockholders of record at the close of business on the date so fixed are entitled to receive the dividend, distribution or allotment of rights, or to exercise such rights, as the case may be, notwithstanding any transfer of any shares on the books of the corporation after the record date so fixed, except as otherwise provided by law.

If the board of directors does not so fix a record date, then the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the board of directors adopts the applicable resolution.

8.2 CHECKS; DRAFTS; EVIDENCES OF INDEBTEDNESS

From time to time, the board of directors shall determine by resolution which person or persons may sign or endorse all checks, drafts, other orders for payment of money, notes or other evidences of indebtedness that are issued in the name of or payable to the corporation, and only the persons so authorized shall sign or endorse those instruments.

8.3 CORPORATE CONTRACTS AND INSTRUMENTS: HOW EXECUTED

The board of directors, except as otherwise provided in these bylaws, may authorize and empower any officer or officers, or agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the corporation; such power and authority may be general or confined to specific instances. Unless so authorized or ratified by the board of directors or within the agency power of an officer, no officer, agent or employee shall have any power or

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authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

8.4 STOCK CERTIFICATES; TRANSFER; PARTLY PAID SHARES

The shares of the corporation shall be represented by certificates, provided that the board of directors of the corporation may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the corporation. Notwithstanding the adoption of such a resolution by the board of directors, every holder of stock represented by certificates and, upon request, every holder of uncertificated shares, shall be entitled to have a certificate signed by, or in the name of the corporation by, the chairman or vice-chairman of the board of directors, or the president or vice-president, and by the treasurer or an assistant treasurer, or the secretary or an assistant secretary of such corporation representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if he or she were such officer, transfer agent or registrar at the date of issue.

Certificates for shares shall be of such form and device as the board of directors may designate and shall state the name of the record holder of the shares represented thereby; its number; date of issuance; the number of shares for which it is issued; a summary statement or reference to the powers,

designations, preferences or other special rights of such stock and the qualifications, limitations or restrictions of such preferences and/or rights, if any; a statement or summary of liens, if any; a conspicuous notice of restrictions upon transfer or registration of transfer, if any; a statement as to any applicable voting trust agreement; if the shares be assessable, or, if assessments are collectible by personal action, a plain statement of such facts.

Upon surrender to the secretary or transfer agent of the corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignment or authority to transfer, it shall be the duty of the corporation to issue a new certificate to the person entitled thereto, cancel the old certificate and record the transaction upon its books.

The corporation may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly paid shares, or upon the books and records of the corporation in the case of uncertificated partly paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully paid shares, the corporation shall declare a dividend upon partly paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

#### 8.5 SPECIAL DESIGNATION ON CERTIFICATES

If the corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the corporation shall issue to represent such class or series of stock; provided, however, that, except as otherwise provided in Section 202 of the General Corporation Law of Delaware, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the corporation shall issue to represent such class or series of stock a statement that the corporation will furnish without charge to each stockholder who so requests the powers, the designations, the preferences and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

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#### 8.6 LOST CERTIFICATES

Except as provided in this Section 8.6, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the corporation and cancelled at the same time. The board of directors may, in case any share certificate or certificate for any other security is lost, stolen or destroyed, authorize the issuance of replacement certificates on such terms and conditions as the board may require; the board may require indemnification of the corporation secured by a bond or other adequate security sufficient to protect the corporation against any claim that may be made against it, including any expense or liability, on account of the alleged loss, theft or destruction of the certificate or the issuance of the replacement certificate.

#### 8.7 TRANSFER AGENTS AND REGISTRARS

The board of directors may appoint one or more transfer agents or transfer clerks, and one or more registrars, each of which shall be an incorporated bank or trust company -- either domestic or foreign, who shall be appointed at such times and places as the requirements of the corporation may necessitate and the board of directors may designate.

#### 8.8 CONSTRUCTION; DEFINITIONS

Unless the context requires otherwise, the general provisions, rules of construction and definitions in the General Corporation Law of Delaware shall govern the construction of these bylaws. Without limiting the generality of this provision, as used in these bylaws, the singular number includes the plural, the plural number includes the singular, and the term "person" includes both an



entity and a natural person.

## ARTICLE IX

### AMENDMENTS

The original or other bylaws of the corporation may be adopted, amended or repealed by the stockholders entitled to vote; provided, however, that the corporation may, in its certificate of incorporation, confer the power to adopt, amend or repeal bylaws upon the directors. The fact that such power has been so conferred upon the directors shall not divest the stockholders of the power, nor limit their power to adopt, amend or repeal bylaws.

Whenever an amendment or new bylaw is adopted, it shall be copied in the book of bylaws with the original bylaws, in the appropriate place. If any bylaw is repealed, the fact of repeal with the date of the meeting at which the repeal was enacted or the filing of the operative written consent(s) shall be stated in said book.

## ARTICLE X

### DISSOLUTION

If it should be deemed advisable in the judgment of the board of directors of the corporation that the corporation should be dissolved, the board, after the adoption of a resolution to that effect by a majority of the whole board at any meeting called for that purpose, shall cause notice to be mailed to each stockholder entitled to vote thereon of the adoption of the resolution and of a meeting of stockholders to take action upon the resolution.

At the meeting a vote shall be taken for and against the proposed dissolution. If a majority of the outstanding stock of the corporation entitled to vote thereon votes for the proposed dissolution, then a certificate stating that the dissolution has been authorized in accordance with the provisions of Section 275 of the General Corporation Law of Delaware and setting forth the names and residences of the directors and officers shall be executed, acknowledged, and filed and shall become effective in accordance with Section 103 of the General Corporation Law of Delaware. Upon

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such certificate's becoming effective in accordance with Section 103 of the General Corporation Law of Delaware, the corporation shall be dissolved.

Whenever all the stockholders entitled to vote on a dissolution consent in writing, either in person or by duly authorized attorney, to a dissolution, no meeting of directors or stockholders shall be necessary. The consent shall be filed and shall become effective in accordance with Section 103 of the General Corporation Law of Delaware. Upon such consent's becoming effective in accordance with Section 103 of the General Corporation Law of Delaware, the corporation shall be dissolved. If the consent is signed by an attorney, then the original power of attorney or a photocopy thereof shall be attached to and filed with the consent. The consent filed with the Secretary of State shall have attached to it the affidavit of the secretary or some other officer of the corporation stating that the consent has been signed by or on behalf of all the stockholders entitled to vote on a dissolution; in addition, there shall be attached to the consent a certification by the secretary or some other officer of the corporation setting forth the names and residences of the directors and officers of the corporation.

## ARTICLE XI

### CUSTODIAN

#### 11.1 APPOINTMENT OF A CUSTODIAN IN CERTAIN CASES

The Court of Chancery, upon application of any stockholder, may appoint one or more persons to be custodians and, if the corporation is insolvent, to be receivers, of and for the corporation when:

(i) at any meeting held for the election of directors the stockholders are so divided that they have failed to elect successors to

directors whose terms have expired or would have expired upon qualification of their successors; or

(ii) the business of the corporation is suffering or is threatened with irreparable injury because the directors are so divided respecting the management of the affairs of the corporation that the required vote for action by the board of directors cannot be obtained and the stockholders are unable to terminate this division; or

(iii) the corporation has abandoned its business and has failed within a reasonable time to take steps to dissolve, liquidate or distribute its assets.

#### 11.2 DUTIES OF CUSTODIAN

The custodian shall have all the powers and title of a receiver appointed under Section 291 of the General Corporation Law of Delaware, but the authority of the custodian shall be to continue the business of the corporation and not to liquidate its affairs and distribute its assets, except when the Court of Chancery otherwise orders and except in cases arising under Sections 226(a)(3) or 352(a)(2) of the General Corporation Law of Delaware.

CERTIFICATE OF DESIGNATION OF RIGHTS, PREFERENCES AND PRIVILEGES OF  
SERIES A PARTICIPATING PREFERRED STOCK OF HARMONIC INC.

The undersigned, Robin N. Dickson does hereby certify:

1. That he/she is duly elected and acting Chief Financial Officer and Assistant Secretary of Harmonic Inc., a Delaware corporation (the "CORPORATION").

2. That pursuant to the authority conferred upon the Board of Directors by the Amended and Restated Certificate of Incorporation of the said Corporation, the said Board of Directors of the Corporation on July 23, 2002 adopted the following resolutions creating a series of Preferred Stock designated as Series A Participating Preferred Stock:

"RESOLVED, that pursuant to the authority vested in the Board of Directors of the corporation by the Amended and Restated Certificate of Incorporation, the Board of Directors does hereby provide for the issue of a series of Preferred Stock of the Corporation and does hereby fix and herein state and express the designations, powers, preferences and relative and other special rights and the qualifications, limitations and restrictions of such series of Preferred Stock as follows:

Section 1. Designation and Amount. The shares of such series shall be designated as "SERIES A PARTICIPATING PREFERRED STOCK." The Series A Participating Preferred Stock shall have a par value of \$0.001 per share, and the number of shares constituting such series shall be 100,000.

Section 2. Proportional Adjustment. In the event that the Corporation shall at any time after the issuance of any share or shares of Series A Participating Preferred Stock (i) declare any dividend on Common Stock of the Corporation ("COMMON STOCK") payable in shares of Common Stock, (ii) subdivide the outstanding Common Stock or (iii) combine the outstanding Common Stock into a smaller number of shares, then in each such case the Corporation shall simultaneously effect a proportional adjustment to the number of outstanding shares of Series A Participating Preferred Stock.

Section 3. Dividends and Distributions.

(a) Subject to the prior and superior right of the holders of any shares of any series of Preferred Stock ranking prior and superior to the shares of Series A Participating Preferred Stock with respect to dividends, the holders of shares of Series A Participating Preferred Stock shall be entitled to receive when, as and if declared by the Board of Directors out of funds legally available for the purpose, quarterly dividends payable in cash on the last day of January, April, July, and October in each year (each such date being referred to herein as a "QUARTERLY DIVIDEND PAYMENT DATE"), commencing on the first Quarterly Dividend Payment Date after the first issuance of a share or fraction of a share of Series A Participating Preferred Stock, in an amount per share (rounded to the nearest cent) equal to 1,000 times the aggregate per share amount of all cash dividends, and 1,000 times the aggregate per share amount (payable in kind) of all non-cash dividends or other distributions other than a dividend payable in shares of Common Stock or a subdivision of the outstanding shares of Common Stock (by reclassification or otherwise), declared on the Common Stock since the immediately preceding Quarterly Dividend Payment Date, or, with respect to the first

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Quarterly Dividend Payment Date, since the first issuance of any share or fraction of a share of Series A Participating Preferred Stock.

(b) The Corporation shall declare a dividend or distribution on the Series A Participating Preferred Stock as provided in paragraph (a) above immediately after it declares a dividend or distribution on the Common Stock (other than a dividend payable in shares of Common Stock).

(c) Dividends shall begin to accrue on outstanding shares of

Series A Participating Preferred Stock from the Quarterly Dividend Payment Date next preceding the date of issue of such shares of Series A Participating Preferred Stock, unless the date of issue of such shares is prior to the record date for the first Quarterly Dividend Payment Date, in which case dividends on such shares shall begin to accrue from the date of issue of such shares, or unless the date of issue is a Quarterly Dividend Payment Date or is a date after the record date for the determination of holders of shares of Series A Participating Preferred Stock entitled to receive a quarterly dividend and before such Quarterly Dividend Payment Date, in either of which events such dividends shall begin to accrue from such Quarterly Dividend Payment Date. Accrued but unpaid dividends shall not bear interest. Dividends paid on the shares of Series A Participating Preferred Stock in an amount less than the total amount of such dividends at the time accrued and payable on such shares shall be allocated pro rata on a share-by-share basis among all such shares at the time outstanding. The Board of Directors may fix a record date for the determination of holders of shares of Series A Participating Preferred Stock entitled to receive payment of a dividend or distribution declared thereon, which record date shall be no more than 30 days prior to the date fixed for the payment thereof.

Section 4. Voting Rights. The holders of shares of Series A Participating Preferred Stock shall have the following voting rights:

(a) Each share of Series A Participating Preferred Stock shall entitle the holder thereof to 1,000 votes on all matters submitted to a vote of the stockholders of the Corporation.

(b) Except as otherwise provided herein or by law, the holders of shares of Series A Participating Preferred Stock and the holders of shares of Common Stock shall vote together as one class on all matters submitted to a vote of stockholders of the Corporation.

(c) Except as required by law, the holders of Series A Participating Preferred Stock shall have no special voting rights and their consent shall not be required (except to the extent that they are entitled to vote with holders of Common Stock as set forth herein) for taking any corporate action.

Section 5. Certain Restrictions.

(a) The Corporation shall not declare any dividend on, make any distribution on, or redeem or purchase or otherwise acquire for consideration any shares of Common Stock after the first issuance of a share or fraction of a share of Series A Participating Preferred Stock unless

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concurrently therewith it shall declare a dividend on the Series A Participating Preferred Stock as required by Section 3 hereof.

(b) Whenever quarterly dividends or other dividends or distributions payable on the Series A Participating Preferred Stock as provided in Section 3 are in arrears, thereafter and until all accrued and unpaid dividends and distributions, whether or not declared, on shares of Series A Participating Preferred Stock outstanding shall have been paid in full, the Corporation shall not

(i) declare or pay dividends on, make any other distributions on, or redeem or purchase or otherwise acquire for consideration any shares of stock ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A Participating Preferred Stock;

(ii) declare or pay dividends on, or make any other distributions on any shares of stock ranking on a parity (either as to dividends or upon liquidation, dissolution or winding up) with the Series A Participating Preferred Stock, except dividends paid ratably on the Series A Participating Preferred Stock and all such parity stock on which dividends are payable or in arrears in proportion to the total amounts to which the holders of all such shares are then entitled;

(iii) redeem or purchase or otherwise acquire for consideration shares of any stock ranking on a parity (either as to dividends or

upon liquidation, dissolution or winding up) with the Series A Participating Preferred Stock, provided that the Corporation may at any time redeem, purchase or otherwise acquire shares of any such parity stock in exchange for shares of any stock of the Corporation ranking junior (either as to dividends or upon dissolution, liquidation or winding up) to the Series A Participating Preferred Stock;

(iv) purchase or otherwise acquire for consideration any shares of Series A Participating Preferred Stock, or any shares of stock ranking on a parity with the Series A Participating Preferred Stock, except in accordance with a purchase offer made in writing or by publication (as determined by the Board of Directors) to all holders of such shares upon such terms as the Board of Directors, after consideration of the respective annual dividend rates and other relative rights and preferences of the respective series and classes, shall determine in good faith will result in fair and equitable treatment among the respective series or classes.

(c) The Corporation shall not permit any subsidiary of the Corporation to purchase or otherwise acquire for consideration any shares of stock of the Corporation unless the Corporation could, under paragraph (a) of this Section 5, purchase or otherwise acquire such shares at such time and in such manner.

Section 6. Reacquired Shares. Any shares of Series A Participating Preferred Stock purchased or otherwise acquired by the Corporation in any manner whatsoever shall be retired and canceled promptly after the acquisition thereof. All such shares shall upon their cancellation become authorized but unissued shares of Preferred Stock and may be reissued as part of a new series of Preferred Stock to be created by resolution or resolutions of the Board of Directors, subject to the conditions and restrictions on issuance set forth herein and in the Amended and Restated Certificate of Incorporation, as then amended.

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Section 7. Liquidation, Dissolution or Winding Up. Upon any liquidation, dissolution or winding up of the Corporation, the holders of shares of Series A Participating Preferred Stock shall be entitled to receive an aggregate amount per share equal to 1,000 times the aggregate amount to be distributed per share to holders of shares of Common Stock plus an amount equal to any accrued and unpaid dividends on such shares of Series A Participating Preferred Stock.

Section 8. Consolidation, Merger, etc. In case the Corporation shall enter into any consolidation, merger, combination or other transaction in which the shares of Common Stock are exchanged for or changed into other stock or securities, cash and/or any other property, then in any such case the shares of Series A Participating Preferred Stock shall at the same time be similarly exchanged or changed in an amount per share equal to 1,000 times the aggregate amount of stock, securities, cash and/or any other property (payable in kind), as the case may be, into which or for which each share of Common Stock is changed or exchanged.

Section 9. No Redemption. The shares of Series Participating Preferred Stock shall not be redeemable.

Section 10. Ranking. The Series A Participating Preferred Stock shall rank junior to all other series of the Corporation's Preferred Stock as to the payment of dividends and the distribution of assets, unless the terms of any such series shall provide otherwise.

Section 11. Amendment. The Amended and Restated Certificate of Incorporation of the Corporation shall not be further amended in any manner which would materially alter or change the powers, preference or special rights of the Series A Participating Preferred Stock so as to affect them adversely without the affirmative vote of the holders of a majority of the outstanding shares of Series A Participating Preferred Stock, voting separately as a series.

Section 12. Fractional Shares. Series A Participating Preferred Stock may be issued in fractions of a share which shall entitle the holder, in proportion to such holder's fractional shares, to exercise voting rights, receive dividends, participate in distributions and to have the benefit of all other rights of holders of Series A Participating Preferred Stock.

RESOLVED FURTHER, that the President, Chief Executive Officer or any Vice President and the Secretary or any Assistant Secretary of this corporation be, and they hereby are, authorized and directed to prepare and file a Certificate of Designation of Rights, Preferences and Privileges in accordance with the foregoing resolution and the provisions of Delaware law and to take such actions as they may deem necessary or appropriate to carry out the intent of the foregoing resolution."

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I further declare under penalty of perjury that the matters set forth in the foregoing Certificate of Designation are true and correct of my own knowledge.

Executed at Sunnyvale, California on July 24, 2002.

/s/Robin N. Dickson

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Robin N. Dickson  
Chief Financial Officer and Assistant  
Secretary  
Harmonic Inc.

HARMONIC INC.  
AND  
MELLON INVESTOR SERVICES LLC

PREFERRED STOCK RIGHTS AGREEMENT  
DATED AS OF JULY 24, 2002

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PREFERRED STOCK RIGHTS AGREEMENT

This Preferred Stock Rights Agreement is dated as of July 24, 2002, between Harmonic Inc., a Delaware corporation, (the "COMPANY"), and Mellon Investor Services LLC, a New Jersey limited liability company (the "RIGHTS AGENT").

On July 23, 2002, (the "RIGHTS DIVIDEND DECLARATION DATE"), the Board of Directors of the Company authorized and declared a dividend of one Preferred Share Purchase Right (a "RIGHT") for each Common Share (as hereinafter defined) of the Company outstanding as of the Close of Business (as hereinafter defined) on August 7, 2002 (the "RECORD DATE"), each Right representing the right to purchase one one-thousandth (0.001) of a share of Series A Participating Preferred Stock (as such number may be adjusted pursuant to the provisions of this Agreement), having the rights, preferences and privileges set forth in the form of Certificate of Designations of Rights, Preferences and Privileges of Series A Participating Preferred Stock attached hereto as Exhibit A, upon the terms and subject to the conditions herein set forth, and further authorized and directed the issuance of one Right (as such number may be adjusted pursuant to the provisions of this Agreement) with respect to each Common Share that shall become outstanding between the Record Date and the earlier of the Distribution Date and the Expiration Date (as such terms are hereinafter defined), and in certain circumstances after the Distribution Date.



NOW, THEREFORE, in consideration of the promises and the mutual agreements herein set forth, the parties hereby agree as follows:

Section 1. Certain Definitions. For purposes of this Agreement, the following terms have the meanings indicated:

(a) "ACQUIRING PERSON" shall mean any Person, who or which, together with all Affiliates and Associates of such Person, shall be the Beneficial Owner of 15% or more of the Common Shares then outstanding, but shall not include the Company, any Subsidiary of the Company or any employee benefit plan of the Company or of any Subsidiary of the Company, or any entity holding Common Shares for or pursuant to the terms of any such plan. Notwithstanding the foregoing, no Person shall be deemed to be an Acquiring Person as the result of an acquisition of Common Shares by the Company which, by reducing the number of shares outstanding, increases the proportionate number of shares beneficially owned by such Person to 15% or more of the Common Shares of the Company then outstanding; provided, however, that if a Person shall become the Beneficial Owner of 15% or more of the Common Shares of the Company then outstanding by reason of share purchases by the Company and shall, after such share purchases by the Company, become the Beneficial Owner of any additional Common Shares of the Company (other than pursuant to a dividend or distribution paid or made by the Company on the outstanding Common Shares in Common Shares or pursuant to a split or subdivision of the outstanding Common Shares), then such Person shall be deemed to be an Acquiring Person unless upon becoming the Beneficial Owner of such additional Common Shares of the Company such Person does not beneficially own 15% or more of the Common Shares of the Company then outstanding. Notwithstanding the

foregoing, (i) if the Company's Board of Directors determines in good faith that a Person who would otherwise be an "Acquiring Person," as defined pursuant to the foregoing provisions of this paragraph (a), has become such inadvertently (including, without limitation, because (A) such Person was unaware that it beneficially owned a percentage of the Common Shares that would otherwise cause such Person to be an "Acquiring Person," as defined pursuant to the foregoing provisions of this paragraph (a), or (B) such Person was aware of the extent of the Common Shares it beneficially owned but had no actual knowledge of the consequences of such beneficial ownership under this Agreement) and without any intention of changing or influencing control of the Company, and if such Person divested or divests as promptly as practicable a sufficient number of Common Shares so that such Person would no longer be an "Acquiring Person," as defined pursuant to the foregoing provisions of this paragraph (a), then such Person shall not be deemed to be or to have become an "Acquiring Person" for any purposes of this Agreement including, without limitation Section 1(gg) hereof; and (ii) if, as of the date hereof, any Person is the Beneficial Owner of 15% or more of the Common Shares outstanding, such Person shall not be or become an "Acquiring Person," as defined pursuant to the foregoing provisions of this paragraph (a), unless and until such time as such Person shall become the Beneficial Owner of additional Common Shares (other than pursuant to a dividend or distribution paid or made by the Company on the outstanding Common Shares in Common Shares or pursuant to a split or subdivision of the outstanding Common Shares), unless, upon becoming the Beneficial Owner of such additional Common Shares, such Person is not then the Beneficial Owner of 15% or more of the Common Shares then outstanding.

(b) "ADJUSTMENT FRACTION" shall have the meaning set forth in Section 11(a)(i) hereof.

(c) "AFFILIATE" and "ASSOCIATE" shall have the respective meanings ascribed to such terms in Rule 12b-2 of the General Rules and Regulations under the Exchange Act, as in effect on the date of this Agreement.

(d) A Person shall be deemed the "BENEFICIAL OWNER" of and shall be deemed to "BENEFICIALLY OWN" any securities:

(i) which such Person or any of such Person's Affiliates or Associates beneficially owns, directly or indirectly, for purposes of Section 13(d) of the Exchange Act and Rule 13d-3 thereunder (or any comparable or successor law or regulation);

(ii) which such Person or any of such Person's Affiliates or Associates has (A) the right to acquire (whether such right is exercisable immediately or only after the passage of time) pursuant to any agreement, arrangement or understanding (other than customary agreements with and between underwriters and selling group members with respect to a bona fide public

offering of securities), or upon the exercise of conversion rights, exchange rights, rights (other than the Rights), warrants or options, or otherwise; provided, however, that a Person shall not be deemed pursuant to this Section 1(d)(ii)(A) to be the Beneficial Owner of, or to beneficially own, (1) securities tendered pursuant to a tender or exchange offer made by or on behalf of such Person or any of such Person's Affiliates or Associates until such tendered securities are accepted for purchase or exchange, or (2) securities which a Person or any of such Person's Affiliates or Associates may be

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deemed to have the right to acquire pursuant to any merger or other acquisition agreement between the Company and such Person (or one or more of its Affiliates or Associates) if such agreement has been approved by the Board of Directors of the Company prior to there being an Acquiring Person; or (B) the right to vote pursuant to any agreement, arrangement or understanding; provided, however, that a Person shall not be deemed the Beneficial Owner of, or to beneficially own, any security under this Section 1(d)(ii)(B) if the agreement, arrangement or understanding to vote such security (1) arises solely from a revocable proxy or consent given to such Person in response to a public proxy or consent solicitation made pursuant to, and in accordance with, the applicable rules and regulations of the Exchange Act and (2) is not also then reportable on Schedule 13D under the Exchange Act (or any comparable or successor report); or

(iii) which are beneficially owned, directly or indirectly, by any other Person (or any Affiliate or Associate thereof) with which such Person or any of such Person's Affiliates or Associates has any agreement, arrangement or understanding, whether or not in writing (other than customary agreements with and between underwriters and selling group members with respect to a bona fide public offering of securities) for the purpose of acquiring, holding, voting (except to the extent contemplated by the proviso to Section 1(d)(ii)(B)) or disposing of any securities of the Company; provided, however, that in no case shall an officer or director of the Company be deemed (x) the Beneficial Owner of any securities beneficially owned by another officer or director of the Company solely by reason of actions undertaken by such persons in their capacity as officers or directors of the Company or (y) the Beneficial Owner of securities held of record by the trustee of any employee benefit plan of the Company or any Subsidiary of the Company for the benefit of any employee of the Company or any Subsidiary of the Company, other than the officer or director, by reason of any influence that such officer or director may have over the voting of the securities held in the plan.

(e) "BUSINESS DAY" shall mean any day other than a Saturday, Sunday or a day on which banking institutions in California and New Jersey are authorized or obligated by law or executive order to close.

(f) "CLOSE OF BUSINESS" on any given date shall mean 5:00 P.M., California time, on such date; provided, however, that if such date is not a Business Day it shall mean 5:00 P.M., California time, on the next succeeding Business Day.

(g) "COMMON SHARES" when used with reference to the Company shall mean the shares of Common Stock of the Company, par value at \$0.001 per share. Common Shares when used with reference to any Person other than the Company shall mean the capital stock (or equity interest) with the greatest voting power of such other Person or, if such other Person is a Subsidiary of another Person, the Person or Persons which ultimately control such first-mentioned Person.

(h) "COMMON STOCK EQUIVALENTS" shall have the meaning set forth in Section 11(a)(iii) hereof.

(i) "COMPANY" shall mean Harmonic Inc., a Delaware corporation, subject to the terms of Section 13(a)(iii)(C) hereof.

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(j) "CURRENT PER SHARE MARKET PRICE" of any security (a "Security" for purposes of this definition), for all computations other than those made pursuant to Section 11(a)(iii) hereof, shall mean the average of the daily closing prices per share of such Security for the thirty (30) consecutive Trading Days immediately prior to but not including such date, and for purposes

of computations made pursuant to Section 11(a)(iii) hereof, the Current Per Share Market Price of any Security on any date shall be deemed to be the average of the daily closing prices per share of such Security for the ten (10) consecutive Trading Days immediately prior to but not including such date; provided, however, that in the event that the Current Per Share Market Price of the Security is determined during a period following the announcement by the issuer of such Security of (i) a dividend or distribution on such Security payable in shares of such Security or securities convertible into such shares or (ii) any subdivision, combination or reclassification of such Security, and prior to the expiration of the applicable thirty (30) Trading Day or ten (10) Trading Day period, after the ex-dividend date for such dividend or distribution, or the record date for such subdivision, combination or reclassification, then, and in each such case, the Current Per Share Market Price shall be appropriately adjusted to reflect the current market price per share equivalent of such Security. The closing price for each day shall be the last sale price, regular way, or, in case no such sale takes place on such day, the average of the closing bid and asked prices, regular way, in either case as reported in the principal consolidated transaction reporting system with respect to securities listed or admitted to trading on the New York Stock Exchange or, if the Security is not listed or admitted to trading on the New York Stock Exchange, as reported in the principal consolidated transaction reporting system with respect to securities listed on the principal national securities exchange on which the Security is listed or admitted to trading or, if the Security is not listed or admitted to trading on any national securities exchange, the last sale price or, if such last sale price is not reported, the average of the high bid and low asked prices in the over-the-counter market, as reported by Nasdaq or such other system then in use, or, if on any such date the Security is not quoted by any such organization, the average of the closing bid and asked prices as furnished by a professional market maker making a market in the Security selected by the Board of Directors of the Company. If on any such date no market maker is making a market in the Security, the fair value of such shares on such date as determined in good faith by the Board of Directors of the Company shall be used. If the Preferred Shares are not publicly traded, the Current Per Share Market Price of the Preferred Shares shall be conclusively deemed to be (x) the Current Per Share Market Price of the Common Shares as determined pursuant to this Section 1(j), as appropriately adjusted to reflect any stock split, stock dividend or similar transaction occurring after the date hereof, multiplied by (y) 1,000. If the Security is not publicly held or so listed or traded, Current Per Share Market Price shall mean the fair value per share as determined in good faith by the Board of Directors of the Company, whose determination shall be described in a statement filed with the Rights Agent and shall be conclusive for all purposes.

(k) "CURRENT VALUE" shall have the meaning set forth in Section 11(a)(iii) hereof.

(l) "DISTRIBUTION DATE" shall mean the earlier of (i) the Close of Business on the tenth (10th) day (or such later date as may be determined by action of the Company's Board of Directors) after the Shares Acquisition Date (or, if the tenth (10th) day after the Shares Acquisition Date occurs before the Record Date, the Close of Business on the Record Date) or (ii) the Close of

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Business on the tenth (10th) Business Day (or such later date as may be determined by action of the Company's Board of Directors) after the date that a tender or exchange offer by any Person (other than the Company, any Subsidiary of the Company, any employee benefit plan of the Company or of any Subsidiary of the Company, or any Person or entity organized, appointed or established by the Company for or pursuant to the terms of any such plan) is first published or sent or given within the meaning of Rule 14d-2(a) of the General Rules and Regulations under the Exchange Act, if, assuming the successful consummation thereof, such Person would be an Acquiring Person.

(m) "EQUIVALENT SHARES" shall mean Preferred Shares and any other class or series of capital stock of the Company which is entitled to the same rights, privileges and preferences as the Preferred Shares.

(n) "EXCHANGE ACT" shall mean the Securities Exchange Act of 1934, as amended.

(o) "EXCHANGE RATIO" shall have the meaning set forth in Section 24(a) hereof.

(p) "EXERCISE PRICE" shall have the meaning set forth in Section 4(a) hereof.

(q) "EXPIRATION DATE" shall mean the earliest to occur of: (i) the Close of Business on the Final Expiration Date, (ii) the Redemption Date, or (iii) the time at which the Board of Directors orders the exchange of the Rights as provided in Section 24 hereof.

(r) "FINAL EXPIRATION DATE" shall mean August 7, 2012.

(s) "NASDAQ" shall mean The Nasdaq Stock Market, Inc.

(t) "PERSON" shall mean any individual, firm, corporation, limited liability company, partnership, trust or other entity, and shall include any successor (by merger or otherwise) of such entity.

(u) "POST-EVENT TRANSFEREE" shall have the meaning set forth in Section 7(e) hereof.

(v) "PREFERRED SHARES" shall mean shares of Series A Participating Preferred Stock, par value \$0.001 per share, of the Company.

(w) "PRE-EVENT TRANSFEREE" shall have the meaning set forth in Section 7(e) hereof.

(x) "PRINCIPAL PARTY" shall have the meaning set forth in Section 13(b) hereof.

(y) "RECORD DATE" shall have the meaning set forth in the recitals at the beginning of this Agreement.

(z) "REDEMPTION DATE" shall have the meaning set forth in Section 23(a) hereof.

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(aa) "REDEMPTION PRICE" shall have the meaning set forth in Section 23(a) hereof.

(bb) "RIGHTS AGENT" shall mean (i) Mellon Investor Services LLC (ii) its successor or replacement as provided in Sections 19 and 21 hereof or (iii) any additional Person appointed pursuant to Section 2 hereof.

(cc) "RIGHTS CERTIFICATE" shall mean a certificate substantially in the form attached hereto as Exhibit B.

(dd) "RIGHTS DIVIDEND DECLARATION DATE" shall have the meaning set forth in the recitals at the beginning of this Agreement.

(ee) "SECTION 11(a) (ii) TRIGGER DATE" shall have the meaning set forth in Section 11(a) (iii) hereof.

(ff) "SECTION 13 EVENT" shall mean any event described in clause (i), (ii) or (iii) of Section 13(a) hereof.

(gg) "SECURITIES ACT" shall mean the Securities Act of 1933, as amended.

(hh) "SHARES ACQUISITION DATE" shall mean the first date of public announcement (which, for purposes of this definition, shall include, without limitation, a report filed pursuant to Section 13(d) of the Exchange Act) by the Company or an Acquiring Person that an Acquiring Person has become such; provided that, if such Person is determined not to have become an Acquiring Person pursuant to Section 1(a) hereof, then no Shares Acquisition Date shall be deemed to have occurred by virtue of such event.

(ii) "SPREAD" shall have the meaning set forth in Section 11(a) (iii) hereof.

(jj) "SUBSIDIARY" of any Person shall mean any corporation or other entity of which an amount of voting securities sufficient to elect a majority of the directors or Persons having similar authority of such

corporation or other entity is beneficially owned, directly or indirectly, by such Person, or any corporation or other entity otherwise controlled by such Person.

(kk) "SUBSTITUTION PERIOD" shall have the meaning set forth in Section 11(a)(iii) hereof.

(ll) "SUMMARY OF RIGHTS" shall mean a summary of this Agreement substantially in the form attached hereto as Exhibit C.

(mm) "TOTAL EXERCISE PRICE" shall have the meaning set forth in Section 4(a) hereof.

(nn) "TRADING DAY" shall mean a day on which the principal national securities exchange on which a referenced security is listed or admitted to trading is open for the transaction of business or, if a referenced security is not listed or admitted to trading on any national securities exchange, a Business Day.

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(oo) A "TRIGGERING EVENT" shall be deemed to have occurred upon any Person becoming an Acquiring Person.

Section 2. Appointment of Rights Agent. The Company hereby appoints the Rights Agent to act as agent for the Company in accordance with the terms and conditions hereof, and the Rights Agent hereby accepts such appointment. The Company may from time to time appoint such co-Rights Agents as it may deem necessary or desirable, upon ten (10) days' prior written notice to the Rights Agent. The Rights Agent shall have no duty to supervise, and shall in no event be liable for, the acts or omissions of any co-Rights Agent.

### Section 3. Issuance of Rights Certificates.

(a) Until the Distribution Date, (i) the Rights will be evidenced (subject to the provisions of Sections 3(b) and 3(c) hereof) by the certificates for Common Shares registered in the names of the holders thereof (which certificates shall also be deemed to be Rights Certificates) and not by separate Rights Certificates and (ii) the right to receive Rights Certificates will be transferable only in connection with the transfer of Common Shares. Until the earlier of the Distribution Date or the Expiration Date, the surrender for transfer of certificates for Common Shares shall also constitute the surrender for transfer of the Rights associated with the Common Shares represented thereby. As soon as practicable after the Distribution Date, the Company will prepare and execute, the Rights Agent will countersign, and the Company will send or cause to be sent (and the Rights Agent will, if requested by written notice, and provided with a shareholder list and all other relevant information which the Rights Agent may request, send) by first-class, postage-prepaid mail, to each record holder of Common Shares as of the Close of Business on the Distribution Date, at the address of such holder shown on the records of the Company, a Rights Certificate evidencing one Right for each Common Share so held, subject to adjustment as provided herein. In the event that an adjustment in the number of Rights per Common Share has been made pursuant to Section 11 hereof, then at the time of distribution of the Rights Certificates, the Company shall make the necessary and appropriate rounding adjustments (in accordance with Section 14(a) hereof) so that Rights Certificates representing only whole numbers of Rights are distributed and cash is paid in lieu of any fractional Rights (in accordance with Section 14(a) hereof). As of the Distribution Date, the Rights will be evidenced solely by such Rights Certificates and may be transferred by the transfer of the Rights Certificates as permitted hereby, separately and apart from any transfer of Common Shares, and the holders of such Rights Certificates as listed in the records of the Company or any transfer agent or registrar for the Rights shall be the record holders thereof. The Company shall promptly notify the Rights Agent in writing upon the occurrence of the Distribution Date. Until such notice is received by the Rights Agent, the Rights Agent may presume conclusively for all purposes that the Distribution Date has not occurred.

(b) On the Record Date or as soon as practicable thereafter, the Company will send a copy of the Summary of Rights by first-class, postage-prepaid mail, to each record holder of Common Shares as of the Close of Business on the Record Date, at the address of such holder shown on the records of the Company's transfer agent and registrar. With respect to certificates for

Common Shares outstanding as of the Record Date, until the Distribution Date, the Rights will be

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evidenced by such certificates registered in the names of the holders thereof together with the Summary of Rights.

(c) Unless the Board of Directors by resolution adopted at or before the time of the issuance of any Common Shares after the Record Date but prior to the earlier of the Distribution Date or the Expiration Date (or, in certain circumstances provided in Section 22 hereof, after the Distribution Date) specifies to the contrary, Rights shall be issued in respect of all Common Shares that are so issued, and Certificates representing such Common Shares shall also be deemed to be certificates for Rights, and shall bear substantially the following legend:

THIS CERTIFICATE ALSO EVIDENCES AND ENTITLES THE HOLDER HEREOF TO CERTAIN RIGHTS AS SET FORTH IN A PREFERRED STOCK RIGHTS AGREEMENT BETWEEN HARMONIC INC. AND MELLON INVESTOR SERVICES LLC (OR ANY SUCCESSOR THERETO), AS THE RIGHTS AGENT, DATED AS OF JULY 24, 2002 (THE "RIGHTS AGREEMENT"), AS MAY BE AMENDED OR SUPPLEMENTED, THE TERMS OF WHICH ARE HEREBY INCORPORATED HEREIN BY REFERENCE AND A COPY OF WHICH IS ON FILE AT THE PRINCIPAL EXECUTIVE OFFICES OF HARMONIC INC. UNDER CERTAIN CIRCUMSTANCES, AS SET FORTH IN THE RIGHTS AGREEMENT, SUCH RIGHTS WILL BE EVIDENCED BY SEPARATE CERTIFICATES AND WILL NO LONGER BE EVIDENCED BY THIS CERTIFICATE. HARMONIC INC. WILL MAIL TO THE HOLDER OF THIS CERTIFICATE A COPY OF THE RIGHTS AGREEMENT WITHOUT CHARGE AFTER RECEIPT OF A WRITTEN REQUEST THEREFOR. UNDER CERTAIN CIRCUMSTANCES SET FORTH IN THE RIGHTS AGREEMENT, RIGHTS ISSUED TO, OR HELD BY, ANY PERSON WHO IS, WAS OR BECOMES AN ACQUIRING PERSON OR ANY AFFILIATE OR ASSOCIATE THEREOF (AS SUCH TERMS ARE DEFINED IN THE RIGHTS AGREEMENT), WHETHER CURRENTLY HELD BY OR ON BEHALF OF SUCH PERSON OR BY ANY SUBSEQUENT HOLDER, MAY BECOME NULL AND VOID.

With respect to such certificates containing the foregoing legend, until the earlier of the Distribution Date or the Expiration Date, the Rights associated with the Common Shares represented by such certificates shall be evidenced by such certificates alone, and the surrender for transfer of any such certificate shall also constitute the transfer of the Rights associated with the Common Shares represented thereby.

(d) In the event that the Company purchases or acquires any Common Shares after the Record Date but prior to the Distribution Date, any Rights associated with such Common Shares shall be deemed canceled and retired so that the Company shall not be entitled to exercise any Rights associated with the Common Shares which are no longer outstanding.

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#### Section 4. Form of Rights Certificates.

(a) The Rights Certificates (and the forms of election to purchase Common Shares and of assignment to be printed on the reverse thereof) shall be substantially in the form of Exhibit B hereto and may have such marks of identification or designation and such legends, summaries or endorsements printed thereon as the Company may deem appropriate (but which do not affect the rights, duties or obligations of the Rights Agent as set forth in this Agreement) and as are not inconsistent with the provisions of this Agreement, or as may be required to comply with any applicable law or with any rule or regulation made pursuant thereto or with any rule or regulation of any stock exchange or a national market system, on which the Rights may from time to time be listed or included, or to conform to usage. Subject to the provisions of Section 11 and Section 22 hereof, the Rights Certificates, whenever distributed, shall be dated as of the Record Date (or in the case of Rights issued with respect to Common Shares issued by the Company after the Record Date, as of the date of issuance of such Common Shares) and on their face shall entitle the holders thereof to purchase such number of one-thousandths (0.001) of a Preferred Share as shall be set forth therein at the price set forth therein (such exercise price per one one-thousandth (0.001) of a Preferred Share being hereinafter referred to as the "EXERCISE PRICE" and the aggregate Exercise Price

of all Preferred Shares issuable upon exercise of one Right being hereinafter referred to as the "TOTAL EXERCISE PRICE"), but the number and type of securities purchasable upon the exercise of each Right and the Exercise Price shall be subject to adjustment as provided herein.

(b) Any Rights Certificate issued pursuant to Section 3(a) or Section 22 hereof that represents Rights beneficially owned by: (i) an Acquiring Person or any Associate or Affiliate of an Acquiring Person, (ii) a Post-Event Transferee, (iii) a Pre-Event Transferee or (iv) any subsequent transferee receiving transferred Rights from a Post-Event Transferee or a Pre-Event Transferee, either directly or through one or more intermediate transferees, and any Rights Certificate issued pursuant to Section 6 or Section 11 hereof upon transfer, exchange, replacement or adjustment of any other Rights Certificate referred to in this sentence, shall contain (to the extent the Rights Agent has notice thereof and to the extent feasible) the following legend:

THE RIGHTS REPRESENTED BY THIS RIGHTS CERTIFICATE ARE OR WERE BENEFICIALLY OWNED BY A PERSON WHO WAS OR BECAME AN ACQUIRING PERSON OR AN AFFILIATE OR ASSOCIATE OF AN ACQUIRING PERSON (AS SUCH TERMS ARE DEFINED IN THE RIGHTS AGREEMENT). ACCORDINGLY, THIS RIGHTS CERTIFICATE AND THE RIGHTS REPRESENTED HEREBY MAY BECOME NULL AND VOID IN THE CIRCUMSTANCES SPECIFIED IN SECTION 7(e) OF THE RIGHTS AGREEMENT.

#### Section 5. Countersignature and Registration.

(a) The Rights Certificates shall be executed on behalf of the Company by its Chairman of the Board, its Chief Executive Officer, its Chief Financial Officer, its President or any Vice President, either manually or by facsimile signature, and by the Secretary or an Assistant Secretary of the Company, either manually or by facsimile signature, and shall have affixed thereto

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the Company's seal (if any) or a facsimile thereof. The Rights Certificates shall be manually countersigned by the Rights Agent and shall not be valid for any purpose unless countersigned. In case any officer of the Company who shall have signed any of the Rights Certificates shall cease to be such officer of the Company before countersignature by the Rights Agent and issuance and delivery by the Company, such Rights Certificates, nevertheless, may be countersigned by the Rights Agent and issued and delivered by the Company with the same force and effect as though the person who signed such Rights Certificates on behalf of the Company had not ceased to be such officer of the Company; and any Rights Certificate may be signed on behalf of the Company by any person who, at the actual date of the execution of such Rights Certificate, shall be a proper officer of the Company to sign such Rights Certificate, although at the date of the execution of this Rights Agreement any such person was not such an officer.

(b) Following the Distribution Date and receipt by the Rights Agent of (i) written notice of the Distribution Date pursuant to Section 3(a) hereof, and (ii) all necessary information requested by the Rights Agent pursuant to Section 3(a) hereof, the Rights Agent will keep or cause to be kept, at its office designated for such purposes, books for registration and transfer of the Rights Certificates issued hereunder. Such books shall show the names and addresses of the respective holders of the Rights Certificates, the number of Rights evidenced on its face by each of the Rights Certificates and the date of each of the Rights Certificates.

#### Section 6. Transfer, Split Up, Combination and Exchange of Rights Certificates; Mutilated, Destroyed, Lost or Stolen Rights Certificates.

(a) Subject to the provisions of Sections 7(e), 14 and 24 hereof, at any time after the Close of Business on the Distribution Date, and at or prior to the Close of Business on the Expiration Date, any Rights Certificate or Rights Certificates may be transferred, split up, combined or exchanged for another Rights Certificate or Rights Certificates, entitling the registered holder to purchase a like number of one-thousandths (0.001) of a Preferred Share (or, following a Triggering Event, other securities, cash or other assets, as the case may be) as the Rights Certificate or Rights Certificates surrendered then entitled such holder to purchase. Any registered holder desiring to transfer, split up, combine or exchange any Rights Certificate or Rights Certificates shall make such request in writing delivered to the Rights Agent, and shall surrender the Rights Certificate or Rights Certificates to be

transferred, split up, combined or exchanged at the office of the Rights Agent designated for such purpose. Neither the Rights Agent nor the Company shall be obligated to take any action whatsoever with respect to the transfer of any such surrendered Rights Certificate until the registered holder shall have properly completed and signed the certificate contained in the form of assignment on the reverse side of such Rights Certificate and shall have provided such additional evidence of the identity of the Beneficial Owner (or former Beneficial Owner) or Affiliates or Associates thereof as the Company or the Rights Agent shall reasonably request. Thereupon the Rights Agent shall, subject to Sections 7(e), 14 and 24 hereof, countersign and deliver to the person entitled thereto a Rights Certificate or Rights Certificates, as the case may be, as so requested. The Company may require payment from the registered holder of a sum sufficient to cover any tax or governmental charge that may be imposed in connection with any transfer, split up, combination or exchange of Rights Certificates. The Rights Agent shall have no duty or obligation to take

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any action under any Section of this Agreement which requires the payment by a Rights holder of applicable taxes and/or governmental charges unless and until it is satisfied that all such taxes or applicable governmental charges have been paid.

(b) Upon receipt by the Company and the Rights Agent of evidence reasonably satisfactory to them of the loss, theft, destruction or mutilation of a Rights Certificate, and, in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to them, and, at the Company's or the Rights Agent's request, reimbursement to the Company and the Rights Agent of all reasonable expenses incidental thereto, and upon surrender to the Rights Agent and cancellation of the Rights Certificate if mutilated, the Company will make and deliver a new Rights Certificate of like tenor to the Rights Agent for delivery to the registered holder in lieu of the Rights Certificate so lost, stolen, destroyed or mutilated.

Section 7. Exercise of Rights; Exercise Price; Expiration Date of Rights.

(a) Subject to Sections 7(e), 23(b) and 24(b) hereof, the registered holder of any Rights Certificate may exercise the Rights evidenced thereby (except as otherwise provided herein) in whole or in part at any time after the Distribution Date and prior to the Close of Business on the Expiration Date by surrender of the Rights Certificate, with the form of election to purchase on the reverse side thereof duly executed, to the Rights Agent at the office of the Rights Agent designated for such purpose, together with payment of the Exercise Price for each one-thousandth (0.001) of a Preferred Share (or, following a Triggering Event, other securities, cash or other assets as the case may be) as to which the Rights are exercised.

(b) The Exercise Price for each one-thousandth (0.001) of a Preferred Share issuable pursuant to the exercise of a Right shall initially be Twenty-Five Dollars (\$25.00), shall be subject to adjustment from time to time as provided in Sections 11 and 13 hereof and shall be payable in lawful money of the United States of America in accordance with paragraph (c) below.

(c) Upon receipt of a Rights Certificate representing exercisable Rights, with the form of election to purchase duly executed, accompanied by payment of the Exercise Price for the number of one-thousandths (0.001) of a Preferred Share (or, following a Triggering Event, other securities, cash or other assets as the case may be) to be purchased and an amount equal to any applicable tax or charge required to be paid by the holder of such Rights Certificate in accordance with Section 9(e) hereof, the Rights Agent shall, subject to Section 20(k) hereof, thereupon promptly (i) (A) requisition from any transfer agent of the Preferred Shares (or make available, if the Rights Agent is the transfer agent for the Preferred Shares) a certificate or certificates for the number of one-thousandths (0.001) of a Preferred Share (or, following a Triggering Event, other securities, cash or other assets as the case may be) to be purchased and the Company hereby irrevocably authorizes its transfer agent to comply with all such requests or (B) if the Company shall have elected to deposit the total number of one-thousandths (0.001) of a Preferred Share (or, following a Triggering Event, other securities, cash or other assets as the case may be) issuable upon exercise of the Rights hereunder with a depository agent, requisition from the depository agent depository receipts representing such number of one-thousandths (0.001) of a Preferred Share (or, following a



Triggering Event, other securities, cash or other assets as the case may be) as are to be purchased (in

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which case certificates for the Preferred Shares (or, following a Triggering Event, other securities, cash or other assets as the case may be) represented by such receipts shall be deposited by the transfer agent with the depository agent) and the Company hereby directs the depository agent to comply with such request, (ii) when appropriate, requisition from the Company the amount of cash to be paid in lieu of issuance of fractional shares in accordance with Section 14 hereof, (iii) after receipt of such certificates or depository receipts, cause the same to be delivered to or upon the order of the registered holder of such Rights Certificate, registered in such name or names as may be designated by such holder and (iv) when appropriate, after receipt thereof, deliver such cash to or upon the order of the registered holder of such Rights Certificate. The payment of the Exercise Price (as such amount may be reduced (including to zero) pursuant to Section 11(a)(iii) hereof) and an amount equal to any applicable tax or charge required to be paid by the holder of such Rights Certificate in accordance with Section 9(e) hereof, may be made in cash or by certified bank check, cashier's check or bank draft payable to the order of the Company. In the event that the Company is obligated to issue securities of the Company other than Preferred Shares, pay cash and/or distribute other property pursuant to Section 11(a) hereof, the Company will make all arrangements necessary so that such other securities, cash and/or other property are available for distribution by the Rights Agent, if and when necessary to comply with this Agreement.

(d) In case the registered holder of any Rights Certificate shall exercise less than all the Rights evidenced thereby, a new Rights Certificate evidencing Rights equivalent to the Rights remaining unexercised shall be issued by the Rights Agent to the registered holder of such Rights Certificate or to his or her duly authorized assigns, subject to the provisions of Section 14 hereof.

(e) Notwithstanding anything in this Agreement to the contrary, from and after the first occurrence of a Triggering Event, any Rights beneficially owned by (i) an Acquiring Person or an Associate or Affiliate of an Acquiring Person, (ii) a transferee of an Acquiring Person (or of any such Associate or Affiliate) who becomes a transferee after the Acquiring Person becomes such (a "POST-EVENT TRANSFEREE"), (iii) a transferee of an Acquiring Person (or of any such Associate or Affiliate) who becomes a transferee prior to or concurrently with the Acquiring Person becoming such and receives such Rights pursuant to either (A) a transfer (whether or not for consideration) from the Acquiring Person to holders of equity interests in such Acquiring Person or to any Person with whom the Acquiring Person has any continuing agreement, arrangement or understanding regarding the transferred Rights or (B) a transfer which the Company's Board of Directors has determined is part of a plan, arrangement or understanding which has as a primary purpose or effect the avoidance of this Section 7(e) (a "PRE-EVENT TRANSFEREE") or (iv) any subsequent transferee receiving transferred Rights from a Post-Event Transferee or a Pre-Event Transferee, either directly or through one or more intermediate transferees, shall become null and void without any further action and no holder of such Rights shall have any rights whatsoever with respect to such Rights, whether under any provision of this Agreement or otherwise. The Company shall notify the Rights Agent when this Section 7(e) applies and shall use all reasonable efforts to ensure that the provisions of this Section 7(e) and Section 4(b) hereof are complied with, but neither the Company nor the Rights Agent shall have any liability to any holder of Rights Certificates or to any other Person as a result of its failure to make any determinations with respect to an Acquiring Person or any of such Acquiring Person's Affiliates, Associates or transferees hereunder.

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(f) Notwithstanding anything in this Agreement to the contrary, neither the Rights Agent nor the Company shall be obligated to undertake any action with respect to a registered holder upon the occurrence of any purported exercise as set forth in this Section 7 unless such registered holder shall, in addition to having complied with the requirements of subsection 7(a), have (i) duly and properly completed and signed the certificate contained in the form of

election to purchase set forth on the reverse side of the Rights Certificate surrendered for such exercise and (ii) provided such additional evidence of the identity of the Beneficial Owner (or former Beneficial Owner) or Affiliates or Associates thereof as the Company or the Rights Agent shall reasonably request.

Section 8. Cancellation and Destruction of Rights Certificates. All Rights Certificates surrendered for the purpose of exercise, transfer, split up, combination or exchange shall, if surrendered to the Company or to any of its agents, be delivered to the Rights Agent for cancellation or in canceled form, or, if surrendered to the Rights Agent, shall be canceled by it, and no Rights Certificates shall be issued in lieu thereof except as expressly permitted by any of the provisions of this Agreement. The Company shall deliver to the Rights Agent for cancellation and retirement, and the Rights Agent shall so cancel and retire, any Rights Certificate purchased or acquired by the Company otherwise than upon the exercise thereof. The Rights Agent shall deliver all canceled Rights Certificates to the Company, or shall, at the written request of the Company, destroy such canceled Rights Certificates, and in such case shall deliver a certificate evidencing the destruction thereof to the Company.

Section 9. Reservation and Availability of Preferred Shares.

(a) The Company covenants and agrees that it will use its best efforts to cause to be reserved and kept available out of its authorized and unissued Preferred Shares not reserved for another purpose (and, following the occurrence of a Triggering Event, out of its authorized and unissued Common Shares and/or other securities), the number of Preferred Shares (and, following the occurrence of the Triggering Event, Common Shares and/or other securities) that will be sufficient to permit the exercise in full of all outstanding Rights.

(b) If the Company shall hereafter list any of its Preferred Shares on a national securities exchange, then so long as the Preferred Shares (and, following the occurrence of a Triggering Event, Common Shares and/or other securities) issuable and deliverable upon exercise of the Rights may be listed on such exchange, the Company shall use its best efforts to cause, from and after such time as the Rights become exercisable (but only to the extent that the Board of Directors of the Company determines that it is reasonably likely that the Rights will be exercised), all shares reserved for such issuance to be listed on such exchange upon official notice of issuance upon such exercise.

(c) The Company shall use its best efforts to (i) file, as soon as practicable following the earliest date after the first occurrence of a Triggering Event in which the consideration to be delivered by the Company upon exercise of the Rights is described in Section 11(a)(ii) or Section 11(a)(iii) hereof, or as soon as is required by law following the Distribution Date, as the case may be, a registration statement under the Securities Act with respect to the securities purchasable

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upon exercise of the Rights on an appropriate form, (ii) cause such registration statement to become effective as soon as practicable after such filing and (iii) cause such registration statement to remain effective (with a prospectus at all times meeting the requirements of the Securities Act) until the earlier of (A) the date as of which the Rights are no longer exercisable for such securities and (B) the date of expiration of the Rights. The Company may temporarily suspend, for a period not to exceed ninety (90) days after the date set forth in clause (i) of the first sentence of this Section 9(c), the exercisability of the Rights in order to prepare and file such registration statement and permit it to become effective. Upon any such suspension, the Company shall issue a public announcement (with prompt written notice thereof to the Rights Agent) stating that the exercisability of the Rights has been temporarily suspended, as well as a public announcement and notification to the Rights Agent at such time as the suspension is no longer in effect. The Company will also take such action as may be appropriate under, or to ensure compliance with, the securities or "blue sky" laws of the various states in connection with the exercisability of the Rights. Notwithstanding any provision of this Agreement to the contrary, the Rights shall not be exercisable in any jurisdiction, unless the requisite qualification in such jurisdiction shall have been obtained, or an exemption therefrom shall be available, and until a registration statement has been declared and remains effective.

(d) The Company covenants and agrees that it will take all such

action as may be necessary to ensure that all Preferred Shares (or other securities of the Company) delivered upon exercise of Rights shall, at the time of delivery of the certificates for such securities (subject to payment of the Exercise Price), be duly and validly authorized and issued and fully paid and nonassessable.

(e) The Company further covenants and agrees that it will pay when due and payable any and all federal and state taxes and governmental charges which may be payable in respect of the original issuance or delivery of the Rights Certificates or of any Preferred Shares (or other securities of the Company) upon the exercise of Rights. The Company shall not, however, be required to pay any tax or charge which may be payable in respect of any transfer or delivery of Rights Certificates to a person other than, or the issuance or delivery of certificates or depository receipts for the Preferred Shares (or other securities of the Company) in a name other than that of, the registered holder of the Rights Certificate evidencing Rights surrendered for exercise or to issue or to deliver any certificates or depository receipts for Preferred Shares (or other securities of the Company) upon the exercise of any Rights until any such tax or charge shall have been paid (any such tax or charge being payable by the holder of such Rights Certificate at the time of surrender) or until it has been established to the Company's satisfaction that no such tax or charge is due.

Section 10. Record Date. Each Person in whose name any certificate for a number of one-thousandths (0.001) of a Preferred Share (or other securities of the Company) is issued upon the exercise of Rights shall for all purposes be deemed to have become the holder of record of Preferred Shares (or other securities of the Company) represented thereby on, and such certificate shall be dated, the date upon which the Rights Certificate evidencing such Rights was duly surrendered and payment of the Total Exercise Price with respect to which the Rights have been exercised (and any applicable taxes or charges) was made; provided, however, that if the date of such surrender and payment is a date upon which the transfer books of the Company are closed, such Person shall be

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deemed to have become the record holder of such shares on, and such certificate shall be dated, the next succeeding Business Day on which the transfer books of the Company are open. Prior to the exercise of the Rights evidenced thereby, the holder of a Rights Certificate shall not be entitled to any rights of a holder of Preferred Shares (or other securities of the Company) for which the Rights shall be exercisable, including, without limitation, the right to vote, to receive dividends or other distributions or to exercise any preemptive rights, and shall not be entitled to receive any notice of any proceedings of the Company, except as provided herein.

Section 11. Adjustment of Exercise Price, Number of Shares or Number of Rights. The Exercise Price, the number and kind of shares or other property covered by each Right and the number of Rights outstanding are subject to adjustment from time to time as provided in this Section 11.

(a) (i) Anything in this Agreement to the contrary notwithstanding, in the event that the Company shall at any time after the date of this Agreement (A) declare a dividend on the Preferred Shares payable in Preferred Shares, (B) subdivide the outstanding Preferred Shares, (C) combine the outstanding Preferred Shares (by reverse stock split or otherwise) into a smaller number of Preferred Shares, or (D) issue any shares of its capital stock in a reclassification of the Preferred Shares (including any such reclassification in connection with a consolidation or merger in which the Company is the continuing or surviving corporation), then, in each such event, except as otherwise provided in this Section 11 and Section 7(e) hereof: (1) the Exercise Price in effect at the time of the record date for such dividend or of the effective date of such subdivision, combination or reclassification shall be adjusted so that the Exercise Price thereafter shall equal the result obtained by dividing the Exercise Price in effect immediately prior to such time by a fraction (the "ADJUSTMENT FRACTION"), the numerator of which shall be the total number of Preferred Shares (or shares of capital stock issued in such reclassification of the Preferred Shares) outstanding immediately following such time and the denominator of which shall be the total number of Preferred Shares outstanding immediately prior to such time; provided, however, that in no event shall the consideration to be paid upon the exercise of one Right be less than the aggregate par value of the shares of capital stock of the Company issuable upon exercise of such Right; and (2) the number of one-thousandths (0.001) of a

Preferred Share (or share of such other capital stock) issuable upon the exercise of each Right shall equal the number of one-thousandths (0.001) of a Preferred Share (or share of such other capital stock) as was issuable upon exercise of a Right immediately prior to the occurrence of the event described in clauses (A)-(D) of this Section 11(a)(i), multiplied by the Adjustment Fraction; provided, however, that, no such adjustment shall be made pursuant to this Section 11(a)(i) to the extent that there shall have simultaneously occurred an event described in clause (A), (B), (C) or (D) of Section 11(n) with a proportionate adjustment being made thereunder. Each Common Share that shall become outstanding after an adjustment has been made pursuant to this Section 11(a)(i) shall have associated with it the number of Rights, exercisable at the Exercise Price and for the number of one-thousandths (0.001) of a Preferred Share (or shares of such other capital stock) as one Common Share has associated with it immediately following the adjustment made pursuant to this Section 11(a)(i).

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(ii) Subject to Section 24 of this Agreement, in the event that a Triggering Event shall have occurred, then promptly following such Triggering Event each holder of a Right, except as provided in Section 7(e) hereof, shall thereafter have the right to receive for each Right, upon exercise thereof in accordance with the terms of this Agreement and payment of the Exercise Price in effect immediately prior to the occurrence of the Triggering Event, in lieu of a number of one-thousandths (0.001) of a Preferred Share, such number of Common Shares of the Company as shall equal the quotient obtained by dividing (A) the product obtained by multiplying (1) the Exercise Price in effect immediately prior to the occurrence of the Triggering Event by (2) the number of one-thousandths (0.001) of a Preferred Share for which a Right was exercisable (or would have been exercisable if the Distribution Date had occurred) immediately prior to the first occurrence of a Triggering Event, by (B) fifty percent (50%) of the Current Per Share Market Price for Common Shares on the date of occurrence of the Triggering Event; provided, however, that the Exercise Price and the number of Common Shares of the Company so receivable upon exercise of a Right shall be subject to further adjustment as appropriate in accordance with Section 11(e) hereof to reflect any events occurring in respect of the Common Shares of the Company after the occurrence of the Triggering Event.

(iii) In lieu of issuing Common Shares in accordance with Section 11(a)(ii) hereof, the Company may, if the Company's Board of Directors determines that such action is necessary or appropriate and not contrary to the interest of holders of Rights and, in the event that the number of Common Shares which are authorized by the Company's Certificate of Incorporation but not outstanding or reserved for issuance for purposes other than upon exercise of the Rights are not sufficient to permit the exercise in full of the Rights, or if any necessary regulatory approval for such issuance has not been obtained by the Company, the Company shall: (A) determine the excess of (1) the value of the Common Shares issuable upon the exercise of a Right (the "CURRENT VALUE") over (2) the Exercise Price (such excess, the "SPREAD") and (B) with respect to each Right, make adequate provision to substitute for such Common Shares, upon exercise of the Rights, (1) cash, (2) a reduction in the Exercise Price, (3) other equity securities of the Company (including, without limitation, shares or units of shares of any series of preferred stock which the Company's Board of Directors has deemed to have the same value as Common Shares (such shares or units of shares of preferred stock are herein called "COMMON STOCK EQUIVALENTS")), except to the extent that the Company has not obtained any necessary stockholder or regulatory approval for such issuance, (4) debt securities of the Company, except to the extent that the Company has not obtained any necessary stockholder or regulatory approval for such issuance, (5) other assets or (6) any combination of the foregoing, having an aggregate value equal to the Current Value, where such aggregate value has been determined by the Company's Board of Directors based upon the advice of a nationally recognized investment banking firm selected by the Company's Board of Directors; provided, however, that if the Company shall not have made adequate provision to deliver value pursuant to clause (B) above within thirty (30) days following the later of (x) the first occurrence of a Triggering Event and (y) the date on which the Company's right of redemption pursuant to Section 23(a) expires (the later of (x) and (y) being referred to herein as the "SECTION 11(a)(ii) TRIGGER DATE"), then the Company shall be obligated to deliver, upon the surrender for exercise of a Right and without requiring payment of the Exercise Price, Common Shares (to the extent available), except to the extent that the Company has not obtained any necessary stockholder or regulatory

approval for such issuance, and then, if necessary, cash, which shares and/or cash have an aggregate value equal to the Spread. If the Company's Board of Directors shall determine in good faith that it is likely that sufficient additional Common Shares could be authorized for issuance upon exercise in full of the Rights or that any necessary regulatory approval for such issuance will be obtained, the thirty (30) day period set forth above may be extended to the extent necessary, but not more than ninety (90) days after the Section 11(a) (ii) Trigger Date, in order that the Company may seek stockholder approval for the authorization of such additional shares or take action to obtain such regulatory approval (such period, as it may be extended, the "SUBSTITUTION PERIOD"). To the extent that the Company determines that some action need be taken pursuant to the first and/or second sentences of this Section 11(a) (iii), the Company (x) shall provide, subject to Section 7(e) hereof, that such action shall apply uniformly to all outstanding Rights and (y) may suspend the exercisability of the Rights until the expiration of the Substitution Period in order to seek any authorization of additional shares, to take any action to obtain any required regulatory approval and/or to decide the appropriate form of distribution to be made pursuant to such first sentence and to determine the value thereof. In the event of any such suspension, the Company shall issue a public announcement (with prompt written notice thereof to the Rights Agent) stating that the exercisability of the Rights has been temporarily suspended, as well as a public announcement (with prompt written notice thereof to the Rights Agent) at such time as the suspension is no longer in effect. For purposes of this Section 11(a) (iii), the value of the Common Shares shall be the Current Per Share Market Price of the Common Shares on the Section 11(a) (ii) Trigger Date and the value of any Common Stock Equivalent shall be deemed to have the same value as the Common Shares on such date.

(b) In case the Company shall, at any time after the date of this Agreement, fix a record date for the issuance of rights, options or warrants to all holders of Preferred Shares entitling such holders (for a period expiring within forty-five (45) calendar days after such record date) to subscribe for or purchase Preferred Shares or Equivalent Shares or securities convertible into Preferred Shares or Equivalent Shares at a price per share (or having a conversion price per share, if a security convertible into Preferred Shares or Equivalent Shares) less than the then Current Per Share Market Price of the Preferred Shares or Equivalent Shares on such record date, then, in each such case, the Exercise Price to be in effect after such record date shall be determined by multiplying the Exercise Price in effect immediately prior to such record date by a fraction, the numerator of which shall be the number of Preferred Shares and Equivalent Shares (if any) outstanding on such record date, plus the number of Preferred Shares or Equivalent Shares, as the case may be, which the aggregate offering price of the total number of Preferred Shares or Equivalent Shares, as the case may be, to be offered or issued (and/or the aggregate initial conversion price of the convertible securities to be offered or issued) would purchase at such current market price, and the denominator of which shall be the number of Preferred Shares and Equivalent Shares (if any) outstanding on such record date, plus the number of additional Preferred Shares or Equivalent Shares, as the case may be, to be offered for subscription or purchase (or into which the convertible securities so to be offered are initially convertible); provided, however, that in no event shall the consideration to be paid upon the exercise of one Right be less than the aggregate par value of the shares of capital stock of the Company issuable upon exercise of one Right. In case such subscription price may be paid in a consideration part or all of which shall be in a form other than cash, the value of such consideration

shall be as determined in good faith by the Company's Board of Directors, whose determination shall be described in a statement filed with the Rights Agent and shall be binding on the Rights Agent and the holders of the Rights. Preferred Shares and Equivalent Shares owned by or held for the account of the Company shall not be deemed outstanding for the purpose of any such computation. Such adjustment shall be made successively whenever such a record date is fixed, and in the event that such rights, options or warrants are not so issued, the Exercise Price shall be adjusted to be the Exercise Price which would then be in effect if such record date had not been fixed.

(c) In case the Company shall, at any time after the date of this Agreement, fix a record date for the making of a distribution to all holders of the Preferred Shares or of any class or series of Equivalent Shares (including any such distribution made in connection with a consolidation or merger in which the Company is the continuing or surviving corporation) of evidences of indebtedness or assets (other than a regular quarterly cash dividend, if any, or a dividend payable in Preferred Shares) or subscription rights, options or warrants (excluding those referred to in Section 11(b)), then, in each such case, the Exercise Price to be in effect after such record date shall be determined by multiplying the Exercise Price in effect immediately prior to such record date by a fraction, the numerator of which shall be the Current Per Share Market Price of a Preferred Share or an Equivalent Share on such record date, less the fair market value per Preferred Share or Equivalent Share (as determined in good faith by the Board of Directors of the Company, whose determination shall be described in a statement filed with the Rights Agent) of the portion of the cash, assets or evidences of indebtedness so to be distributed or of such subscription rights or warrants applicable to a Preferred Share or Equivalent Share, as the case may be, and the denominator of which shall be such Current Per Share Market Price of a Preferred Share or Equivalent Share on such record date; provided, however, that in no event shall the consideration to be paid upon the exercise of one Right be less than the aggregate par value of the shares of capital stock of the Company issuable upon exercise of one Right. Such adjustments shall be made successively whenever such a record date is fixed, and in the event that such distribution is not so made, the Exercise Price shall be adjusted to be the Exercise Price which would have been in effect if such record date had not been fixed.

(d) Anything herein to the contrary notwithstanding, no adjustment in the Exercise Price shall be required unless such adjustment would require an increase or decrease of at least one percent (1%) of the Exercise Price; provided, however, that any adjustments which by reason of this Section 11(d) are not required to be made shall be carried forward and taken into account in any subsequent adjustment. All calculations under this Section 11 shall be made to the nearest cent or to the nearest ten-thousandth (0.0001) of a Common Share or other share or one hundred-thousandth (0.00001) of a Preferred Share, as the case may be. Notwithstanding the first sentence of this Section 11(d), any adjustment required by this Section 11 shall be made no later than the earlier of (i) three (3) years from the date of the transaction which requires such adjustment or (ii) the Expiration Date.

(e) If as a result of an adjustment made pursuant to Section 11(a) or Section 13(a) hereof, the holder of any Right thereafter exercised shall become entitled to receive any shares of capital stock other than Preferred Shares, thereafter the number of such other shares so receivable

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upon exercise of any Right and, if required, the Exercise Price thereof, shall be subject to adjustment from time to time in a manner and on terms as nearly equivalent as practicable to the provisions with respect to the Preferred Shares contained in Sections 11(a), 11(b), 11(c), 11(d), 11(g), 11(h), 11(i), 11(j), 11(k) and 11(l), and the provisions of Sections 7, 9, 10, 13 and 14 with respect to the Preferred Shares shall apply on like terms to any such other shares.

(f) All Rights originally issued by the Company subsequent to any adjustment made to the Exercise Price hereunder shall evidence the right to purchase, at the adjusted Exercise Price, the number of one-thousandths (0.001) of a Preferred Share purchasable from time to time hereunder upon exercise of the Rights, all subject to further adjustment as provided herein.

(g) Unless the Company shall have exercised its election as provided in Section 11(h), upon each adjustment of the Exercise Price as a result of the calculations made in Section 11(b) and (c), each Right outstanding immediately prior to the making of such adjustment shall thereafter evidence the right to purchase, at the adjusted Exercise Price, that number of Preferred Shares (calculated to the nearest one hundred-thousandth (0.00001) of a share) obtained by (i) multiplying (x) the number of Preferred Shares covered by a Right immediately prior to this adjustment, by (y) the Exercise Price in effect immediately prior to such adjustment of the Exercise Price, and (ii) dividing the product so obtained by the Exercise Price in effect immediately after such adjustment of the Exercise Price.

(h) The Company may elect on or after the date of any adjustment of the Exercise Price as a result of the calculations made in Section 11(b) or (c) to adjust the number of Rights, in substitution for any adjustment in the number of Preferred Shares purchasable upon the exercise of a Right. Each of the Rights outstanding after such adjustment of the number of Rights shall be exercisable for the number of one-thousandths (0.001) of a Preferred Share for which a Right was exercisable immediately prior to such adjustment. Each Right held of record prior to such adjustment of the number of Rights shall become that number of Rights (calculated to the nearest one hundred-thousandth (0.00001)) obtained by dividing the Exercise Price in effect immediately prior to adjustment of the Exercise Price by the Exercise Price in effect immediately after adjustment of the Exercise Price. The Company shall make a public announcement (with prompt written notice thereof to the Rights Agent) of its election to adjust the number of Rights, indicating the record date for the adjustment, and, if known at the time, the amount of the adjustment to be made. This record date may be the date on which the Exercise Price is adjusted or any day thereafter, but, if any Rights Certificates have been issued, shall be at least ten (10) days later than the date of the public announcement. If Rights Certificates have been issued, upon each adjustment of the number of Rights pursuant to this Section 11(h), the Company shall, as promptly as practicable, cause to be distributed to holders of record of Rights Certificates on such record date Rights Certificates evidencing, subject to Section 14 hereof, the additional Rights to which such holders shall be entitled as a result of such adjustment, or, at the option of the Company, shall cause to be distributed to such holders of record in substitution and replacement for the Rights Certificates held by such holders prior to the date of adjustment, and upon surrender thereof, if required by the Company, new Rights Certificates evidencing all the Rights to which such holders shall be entitled after such adjustment. Rights Certificates so to be distributed shall be issued, executed and countersigned in the manner

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provided for herein (and may bear, at the option of the Company, the adjusted Exercise Price) and shall be registered in the names of the holders of record of Rights Certificates on the record date specified in the public announcement.

(i) Irrespective of any adjustment or change in the Exercise Price or the number of Preferred Shares issuable upon the exercise of the Rights, the Rights Certificates theretofore and thereafter issued may continue to express the Exercise Price per one one-thousandth (0.001) of a Preferred Share and the number of one-thousandths (0.001) of a Preferred Share which were expressed in the initial Rights Certificates issued hereunder.

(j) Before taking any action that would cause an adjustment reducing the Exercise Price below the par or stated value, if any, of the number of one-thousandths (0.001) of a Preferred Share issuable upon exercise of the Rights, the Company shall take any corporate action which may, in the opinion of its counsel, be necessary in order that the Company may validly and legally issue as fully paid and nonassessable shares such number of one-thousandths (0.001) of a Preferred Share at such adjusted Exercise Price.

(k) In any case in which this Section 11 shall require that an adjustment in the Exercise Price be made effective as of a record date for a specified event, the Company may elect to defer (with prompt written notice thereof to the Rights Agent) until the occurrence of such event the issuing to the holder of any Right exercised after such record date of the number of one-thousandths (0.001) of a Preferred Share and other capital stock or securities of the Company, if any, issuable upon such exercise over and above the number of one-thousandths (0.001) of a Preferred Share and other capital stock or securities of the Company, if any, issuable upon such exercise on the basis of the Exercise Price in effect prior to such adjustment; provided, however, that the Company shall deliver to such holder a due bill or other appropriate instrument evidencing such holder's right to receive such additional shares (fractional or otherwise) upon the occurrence of the event requiring such adjustment.

(l) Anything in this Section 11 to the contrary notwithstanding, prior to the Distribution Date, the Company shall be entitled to make such reductions in the Exercise Price, in addition to those adjustments expressly required by this Section 11, as and to the extent that it in its sole discretion shall determine to be advisable in order that any (i) consolidation or subdivision of the Preferred or Common Shares, (ii) issuance wholly for cash of

any Preferred or Common Shares at less than the current market price, (iii) issuance wholly for cash of Preferred or Common Shares or securities which by their terms are convertible into or exchangeable for Preferred or Common Shares, (iv) stock dividends or (v) issuance of rights, options or warrants referred to in this Section 11, hereafter made by the Company to holders of its Preferred or Common Shares shall not be taxable to such stockholders.

(m) The Company covenants and agrees that, after the Distribution Date, it will not, except as permitted by Sections 23, 24 or 27 hereof, take (or permit to be taken) any action if at the time such action is taken it is reasonably foreseeable that such action will diminish substantially or otherwise eliminate the benefits intended to be afforded by the Rights.

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(n) In the event that the Company shall at any time after the date of this Agreement (A) declare a dividend on the Common Shares payable in Common Shares, (B) subdivide the outstanding Common Shares, (C) combine the outstanding Common Shares (by reverse stock split or otherwise) into a smaller number of Common Shares, or (D) issue any shares of its capital stock in a reclassification of the Common Shares (including any such reclassification in connection with a consolidation or merger in which the Company is the continuing or surviving corporation), then, in each such event, except as otherwise provided in this Section 11(a) and Section 7(e) hereof: (1) each Common Share (or shares of capital stock issued in such reclassification of the Common Shares) outstanding immediately following such time shall have associated with it the number of Rights as were associated with one Common Share immediately prior to the occurrence of the event described in clauses (A)-(D) above; (2) the Exercise Price in effect at the time of the record date for such dividend or of the effective date of such subdivision, combination or reclassification shall be adjusted so that the Exercise Price thereafter shall equal the result obtained by multiplying the Exercise Price in effect immediately prior to such time by a fraction, the numerator of which shall be the total number of Common Shares outstanding immediately prior to the event described in clauses (A)-(D) above, and the denominator of which shall be the total number of Common Shares outstanding immediately after such event; provided, however, that in no event shall the consideration to be paid upon the exercise of one Right be less than the aggregate par value of the shares of capital stock of the Company issuable upon exercise of such Right; and (3) the number of one-thousandths (0.001) of a Preferred Share (or shares of such other capital stock) issuable upon the exercise of each Right outstanding after such event shall equal the number of one-thousandths (0.001) of a Preferred Share (or shares of such other capital stock) as were issuable with respect to one Right immediately prior to such event. Each Common Share that shall become outstanding after an adjustment has been made pursuant to this Section 11(n) shall have associated with it the number of Rights, exercisable at the Exercise Price and for the number of one-thousandths (0.001) of a Preferred Share (or shares of such other capital stock) as one Common Share has associated with it immediately following the adjustment made pursuant to this Section 11(n). If an event occurs which would require an adjustment under both this Section 11(n) and Section 11(a) (ii) hereof, the adjustment provided for in this Section 11(n) shall be in addition to, and shall be made prior to, any adjustment required pursuant to Section 11(a) (ii) hereof.

Section 12. Certificate of Adjusted Exercise Price or Number of Shares. Whenever an adjustment is made or any event affecting the Rights or their exercisability (including without limitation an event which causes Rights to become null and void) occurs as provided in Sections 11 and 13 hereof, the Company shall promptly (a) prepare a certificate setting forth such adjustment and a brief statement of the facts and calculations accounting for such adjustment, (b) file with the Rights Agent and with each transfer agent for the Preferred Shares a copy of such certificate and (c) mail a brief summary thereof to each holder of a Rights Certificate in accordance with Section 26 hereof. Notwithstanding the foregoing sentence, the failure of the Company to make such certification or give such notice shall not affect the validity of such adjustment or the force or effect of the requirement for such adjustment. The Rights Agent shall be fully protected in relying on any such certificate and on any adjustment contained therein and shall have no duty with respect to and shall not be deemed to have knowledge of such adjustment or event unless and until it shall have received such certificate.

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Section 13. Consolidation, Merger or Sale or Transfer of Assets or Earning Power.

(a) In the event that, following a Triggering Event, directly or indirectly:

(i) the Company shall consolidate with, or merge with and into, any other Person (other than a wholly-owned Subsidiary of the Company in a transaction the principal purpose of which is to change the state of incorporation of the Company and which complies with Section 11(m) hereof);

(ii) any Person (other than a subsidiary of the Company) shall consolidate with the Company, or merge with and into the Company and the Company shall be the continuing or surviving corporation of such consolidation or merger and, in connection with such merger, all or part of the Common Shares shall be changed into or exchanged for stock or other securities of any other Person (or the Company); or

(iii) the Company shall sell or otherwise transfer (or one or more of its Subsidiaries shall sell or otherwise transfer), in one or more transactions, assets or earning power aggregating fifty percent (50%) or more of the assets or earning power of the Company and its Subsidiaries (taken as a whole) to any other Person or Persons (other than the Company or one or more of its wholly owned Subsidiaries in one or more transactions, each of which individually (and together) complies with Section 11(m) hereof),

then, concurrent with and in each such case,

(A) each holder of a Right (except as provided in Section 7(e) hereof) shall thereafter have the right to receive, upon the exercise thereof at a price equal to the Total Exercise Price applicable immediately prior to the occurrence of the Section 13 Event in accordance with the terms of this Agreement, such number of validly authorized and issued, fully paid, nonassessable and freely tradeable Common Shares of the Principal Party (as hereinafter defined), free of any liens, encumbrances, rights of first refusal or other adverse claims, as shall be equal to the result obtained by dividing such Total Exercise Price by an amount equal to fifty percent (50%) of the Current Per Share Market Price of the Common Shares of such Principal Party on the date of consummation of such Section 13 Event, provided, however, that the Exercise Price and the number of Common Shares of such Principal Party so receivable upon exercise of a Right shall be subject to further adjustment as appropriate in accordance with Section 11(e) hereof;

(B) such Principal Party shall thereafter be liable for, and shall assume, by virtue of such Section 13 Event, all the obligations and duties of the Company pursuant to this Agreement;

(C) the term "Company" shall thereafter be deemed to refer to such Principal Party, it being specifically intended that the provisions of Section 11 hereof shall apply only to such Principal Party following the first occurrence of a Section 13 Event;

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(D) such Principal Party shall take such steps (including, but not limited to, the reservation of a sufficient number of its Common Shares to permit the exercise of Rights in full for such Common Shares) in connection with the consummation of any such transaction as may be necessary to ensure that the provisions hereof shall thereafter be applicable, as nearly as reasonably may be, in relation to its Common Shares thereafter deliverable upon the exercise of the Rights; and

(E) upon the subsequent occurrence of any consolidation, merger, sale or transfer of assets or other extraordinary transaction in respect of such Principal Party, each holder of a Right shall thereupon be entitled to receive, upon exercise of a Right and payment of the Total Exercise Price as provided in this Section 13(a), such cash, shares, rights, warrants and other property which such holder would have been entitled to receive had such holder, at the time of such transaction, owned the Common Shares of the Principal Party receivable upon the exercise of such Right pursuant to this Section 13(a), and such Principal Party shall take such steps (including, but not limited to, reservation of shares of stock) as may be

necessary to permit the subsequent exercise of the Rights in accordance with the terms hereof for such cash, shares, rights, warrants and other property.

(F) For purposes hereof, the "earning power" of the Company and its Subsidiaries shall be determined in good faith by the Company's Board of Directors on the basis of the operating income of each business operated by the Company and its Subsidiaries during the three fiscal years preceding the date of such determination (or, in the case of any business not operated by the Company or any Subsidiary during three full fiscal years preceding such date, during the period such business was operated by the Company or any Subsidiary).

(b) For purposes of this Agreement, the term "PRINCIPAL PARTY" shall mean:

(i) in the case of any transaction described in clause (i) or (ii) of Section 13(a) hereof: (A) the Person that is the issuer of the securities into which the Common Shares are converted in such merger or consolidation, or, if there is more than one such issuer, the issuer the Common Shares of which have the greatest aggregate market value of shares outstanding, or (B) if no securities are so issued, (x) the Person that is the other party to the merger, if such Person survives said merger, or, if there is more than one such Person, the Person the Common Shares of which have the greatest aggregate market value of shares outstanding or (y) if the Person that is the other party to the merger does not survive the merger, the Person that does survive the merger (including the Company if it survives) or (z) the Person resulting from the consolidation; and

(ii) in the case of any transaction described in clause (iii) of Section 13(a) hereof, the Person that is the party receiving the greatest portion of the assets or earning power transferred pursuant to such transaction or transactions, or, if more than one Person that is a party to such transaction or transactions receives the same portion of the assets or earning power so transferred and each such portion would, were it not for the other equal portions, constitute the greatest portion of the assets or earning power so transferred, or if the Person receiving the greatest portion of the assets or earning power cannot be determined, whichever of such Persons is the issuer of Common Shares having the greatest aggregate market value of shares outstanding; provided,

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however, that in any such case described in the foregoing clause (b) (i) or (b) (ii), if the Common Shares of such Person are not at such time or have not been continuously over the preceding 12-month period registered under Section 12 of the Exchange Act, then (1) if such Person is a direct or indirect Subsidiary of another Person the Common Shares of which are and have been so registered, the term "Principal Party" shall refer to such other Person, or (2) if such Person is a Subsidiary, directly or indirectly, of more than one Person, the Common Shares of which are and have been so registered, the term "Principal Party" shall refer to whichever of such Persons is the issuer of Common Shares having the greatest aggregate market value of shares outstanding, or (3) if such Person is owned, directly or indirectly, by a joint venture formed by two or more Persons that are not owned, directly or indirectly by the same Person, the rules set forth in clauses (1) and (2) above shall apply to each of the owners having an interest in the venture as if the Person owned by the joint venture was a Subsidiary of both or all of such joint venturers, and the Principal Party in each such case shall bear the obligations set forth in this Section 13 in the same ratio as its interest in such Person bears to the total of such interests.

(c) The Company shall not consummate any Section 13 Event unless the Principal Party shall have a sufficient number of authorized Common Shares that have not been issued or reserved for issuance to permit the exercise in full of the Rights in accordance with this Section 13 and unless prior thereto the Company and such issuer shall have executed and delivered to the Rights Agent a supplemental agreement confirming that such Principal Party shall, upon consummation of such Section 13 Event, assume this Agreement in accordance with Sections 13(a) and 13(b) hereof, that all rights of first refusal or preemptive rights in respect of the issuance of Common Shares of such Principal Party upon exercise of outstanding Rights have been waived, that there are no rights, warrants, instruments or securities outstanding or any agreements or arrangements which, as a result of the consummation of such transaction, would eliminate or substantially diminish the benefits intended to be afforded by the

Rights and that such transaction shall not result in a default by such Principal Party under this Agreement, and further providing that, as soon as practicable after the date of such Section 13 Event, such Principal Party will:

(i) prepare and file a registration statement under the Securities Act with respect to the Rights and the securities purchasable upon exercise of the Rights on an appropriate form, use its best efforts to cause such registration statement to become effective as soon as practicable after such filing and use its best efforts to cause such registration statement to remain effective (with a prospectus at all times meeting the requirements of the Securities Act) until the Expiration Date, and similarly comply with applicable state securities laws;

(ii) use its best efforts to list (or continue the listing of) the Rights and the securities purchasable upon exercise of the Rights on a national securities exchange or to meet the eligibility requirements for quotation on Nasdaq and list (or continue the listing of) the Rights and the securities purchasable upon exercise of the Rights on Nasdaq; and

(iii) deliver to holders of the Rights historical financial statements for such Principal Party which comply in all respects with the requirements for registration on Form 10 (or any successor form) under the Exchange Act.

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In the event that at any time after the occurrence of a Triggering Event some or all of the Rights shall not have been exercised at the time of a transaction described in this Section 13, the Rights which have not theretofore been exercised shall thereafter be exercisable in the manner described in Section 13(a) (without taking into account any prior adjustment required by Section 11(a)(ii)).

(d) In case the "Principal Party" for purposes of Section 13(b) hereof has provision in any of its authorized securities or in its certificate of incorporation or by-laws or other instrument governing its corporate affairs, which provision would have the effect of (i) causing such Principal Party to issue (other than to holders of Rights pursuant to Section 13 hereof), in connection with, or as a consequence of, the consummation of a Section 13 Event, Common Shares or Equivalent Shares of such Principal Party at less than the then Current Per Share Market Price thereof or securities exercisable for, or convertible into, Common Shares or Equivalent Shares of such Principal Party at less than such then Current Per Share Market Price, or (ii) providing for any special payment, tax or similar provision in connection with the issuance of the Common Shares of such Principal Party pursuant to the provisions of Section 13 hereof, then, in such event, the Company hereby agrees with each holder of Rights that it shall not consummate any such transaction unless prior thereto the Company and such Principal Party shall have executed and delivered to the Rights Agent a supplemental agreement providing that the provision in question of such Principal Party shall have been canceled, waived or amended, or that the authorized securities shall be redeemed, so that the applicable provision will have no effect in connection with or as a consequence of, the consummation of the proposed transaction.

(e) The Company covenants and agrees that it shall not, at any time after the Distribution Date, effect or permit to occur any Section 13 Event, if (i) at the time or immediately after such Section 13 Event there are any rights, warrants or other instruments or securities outstanding or agreements in effect which would substantially diminish or otherwise eliminate the benefits intended to be afforded by the Rights, (ii) prior to, simultaneously with or immediately after such Section 13 Event, the stockholders of the Person who constitutes, or would constitute, the "Principal Party" for purposes of Section 13(b) hereof shall have received a distribution of Rights previously owned by such Person or any of its Affiliates or Associates or (iii) the form or nature of organization of the Principal Party would preclude or limit the exercisability of the Rights.

(f) The provisions of this Section 13 shall similarly apply to successive mergers or consolidations or sales or other transfers.

#### Section 14. Fractional Rights and Fractional Shares.

(a) The Company shall not be required to issue fractions of

Rights or to distribute Rights Certificates which evidence fractional Rights. In lieu of such fractional Rights, there shall be paid to the registered holders of the Rights Certificates with regard to which such fractional Rights would otherwise be issuable, an amount in cash equal to the same fraction of the current market value of a whole Right. For the purposes of this Section 14(a), the current market value of a whole Right shall be the closing price of the Rights for the Trading Day immediately prior to the date on

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which such fractional Rights would have been otherwise issuable, as determined pursuant to the second sentence of Section 1(j) hereof.

(b) The Company shall not be required to issue fractions of Preferred Shares (other than fractions that are integral multiples of one one-thousandth (0.001) of a Preferred Share) upon exercise of the Rights or to distribute certificates which evidence fractional Preferred Shares (other than fractions that are integral multiples of one one-thousandth (0.001) of a Preferred Share). Interests in fractions of Preferred Shares in integral multiples of one one-thousandth (0.001) of a Preferred Share may, at the election of the Company, be evidenced by depository receipts, pursuant to an appropriate agreement between the Company and a depository selected by it; provided, that such agreement shall provide that the holders of such depository receipts shall have all the rights, privileges and preferences to which they are entitled as beneficial owners of the Preferred Shares represented by such depository receipts. In lieu of fractional Preferred Shares that are not integral multiples of one one-thousandth (0.001) of a Preferred Share, the Company shall pay to the registered holders of Rights Certificates at the time such Rights are exercised as herein provided an amount in cash equal to the same fraction of the current market value of a Preferred Share. For purposes of this Section 14(b), the current market value of a Preferred Share shall be (x) one thousand multiplied by (y) the closing price of a Common Share (as determined pursuant to the second sentence of Section 1(j) hereof) for the Trading Day immediately prior to the date of such exercise.

(c) The Company shall not be required to issue fractions of Common Shares or to distribute certificates which evidence fractional Common Shares upon the exercise or exchange of Rights. In lieu of such fractional Common Shares, the Company shall pay to the registered holders of Rights Certificates at the time such Rights are exercised as herein provided an amount in cash equal to the same fraction of the current market value of a Common Share. For purposes of this Section 14(c), the current market value of a Common Share shall be the closing price of a Common Share (as determined pursuant to the second sentence of Section 1(j) hereof) for the Trading Day immediately prior to the date of such exercise.

(d) The holder of a Right by the acceptance of the Right expressly waives his or her right to receive any fractional Rights or any fractional shares (other than fractions that are integral multiples of one one-thousandth (0.001) of a Preferred Share) upon exercise of a Right.

(e) Whenever a payment for fractional Rights or fractional shares is to be made by the Rights Agent, the Company shall (i) promptly prepare and deliver to the Rights Agent a certificate setting forth in reasonable detail the facts related to such payments and the prices and/or formulas utilized in calculating such payments, and (ii) provide sufficient monies to the Rights Agent in the form of fully collected funds to make such payments. The Rights Agent shall be fully authorized and protected in relying upon such a certificate and shall have no duty with respect to, and shall not be deemed to have knowledge of, any payment for fractional Rights or fractional shares under any Section of this Agreement relating to the payment of fractional Rights or fractional shares unless and until the Rights Agent shall have received such a certificate and sufficient monies.

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#### Section 15. Rights of Action.

(a) All rights of action in respect of this Agreement, excepting the rights of action given to the Rights Agent pursuant to Section 18 and Section 20 hereof, are vested in the respective registered holders of the Rights

Certificates (and, prior to the Distribution Date, the registered holders of the Common Shares); and any registered holder of any Rights Certificate (or, prior to the Distribution Date, of the Common Shares), without the consent of the Rights Agent or of the holder of any other Rights Certificate (or, prior to the Distribution Date, of the Common Shares), may, in his or her own behalf and for his or her own benefit, enforce, and may institute and maintain any suit, action or proceeding against the Company to enforce, or otherwise act in respect of, his or her right to exercise the Rights evidenced by such Rights Certificate in the manner provided in such Rights Certificate and in this Agreement. Without limiting the foregoing or any remedies available to the holders of Rights, it is specifically acknowledged that the holders of Rights would not have an adequate remedy at law for any breach of this Agreement and will be entitled to specific performance of the obligations under, and injunctive relief against actual or threatened violations of, the obligations of any Person subject to this Agreement.

(b) Notwithstanding anything in this Agreement to the contrary, neither the Company nor the Rights Agent shall have any liability to any holder of a Right or other Person as a result of its inability to perform any of its obligations under this Agreement by reason of any preliminary or permanent injunction or other order, judgment, decree or ruling (whether interlocutory or final) issued by a court or by a governmental, regulatory, self-regulatory or administrative agency or commission, or any statute, rule, regulation or executive order promulgated or enacted by any governmental authority, prohibiting or otherwise restraining performance of such obligation; provided, however, that the Company must use all reasonable efforts to have any such injunction, order, judgment, decree or ruling lifted or otherwise overturned as soon as possible.

Section 16. Agreement of Rights Holders. Every holder of a Right, by accepting the same, consents and agrees with the Company and the Rights Agent and with every other holder of a Right that:

(a) prior to the Distribution Date, the Rights will be transferable only in connection with the transfer of the Common Shares;

(b) after the Distribution Date, the Rights Certificates are transferable only on the registry books of the Rights Agent if surrendered at the principal office or offices of the Rights Agent designated for such purposes, duly endorsed or accompanied by a proper instrument of transfer and with the appropriate forms and certificates fully executed; and

(c) subject to Sections 6(a) and 7(f) hereof, the Company and the Rights Agent may deem and treat the person in whose name the Rights Certificate (or, prior to the Distribution Date, the associated Common Shares certificate) is registered as the absolute owner thereof and of the Rights evidenced thereby (notwithstanding any notations of ownership or writing on the Rights Certificates or the associated Common Shares certificate made by anyone other than the Company or

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the Rights Agent) for all purposes whatsoever, and neither the Company nor the Rights Agent shall be affected by any notice to the contrary.

Section 17. Rights Certificate Holder Not Deemed a Stockholder. No holder, as such, of any Rights Certificate shall be entitled to vote, receive dividends or be deemed for any purpose to be the holder of the Preferred Shares or any other securities of the Company which may at any time be issuable on the exercise of the Rights represented thereby, nor shall anything contained herein or in any Rights Certificate be construed to confer upon the holder of any Rights Certificate, as such, any of the rights of a stockholder of the Company or any right to vote for the election of directors or upon any matter submitted to stockholders at any meeting thereof, or to give or withhold consent to any corporate action, or to receive notice of meetings or other actions affecting stockholders (except as specifically provided in Section 25 hereof), or to receive dividends or subscription rights, or otherwise, until the Right or Rights evidenced by such Rights Certificate shall have been exercised in accordance with the provisions hereof.

Section 18. Concerning the Rights Agent.

(a) The Company agrees to pay to the Rights Agent reasonable

compensation for all services rendered by it hereunder and, from time to time, on demand of the Rights Agent, its reasonable expenses and counsel fees and other disbursements incurred in the preparation, administration, delivery, execution and amendment of this Agreement and the exercise and performance of its duties hereunder. The Company also agrees to indemnify the Rights Agent for, and to hold it harmless against, any loss, liability, damage, judgment, fine, penalty, claim, demand, settlement, cost or expense (including, without limitation, the reasonable fees and expenses of legal counsel), incurred without gross negligence, bad faith or willful misconduct on the part of the Rights Agent (which gross negligence, bad faith or willful misconduct must be determined by a final, non-appealable order, judgment, decree or ruling of a court of competent jurisdiction), for any action taken, suffered or omitted by the Rights Agent in connection with the acceptance, exercise, performance or administration of its duties under this Agreement, including, without limitation, the costs and expenses of defending against any claim of liability in the premises. The costs and expenses incurred by the Rights Agent in enforcing this right of indemnification shall be paid by the Company. The provisions of this Section 18 and Section 20 below shall survive the termination of this Agreement, the exercise or expiration of the Rights and the resignation or removal of the Rights Agent.

(b) The Rights Agent shall be authorized and protected and shall incur no liability for, or in respect of any action taken, suffered or omitted by it in connection with, its administration of this Agreement or the exercise or performance of its duties hereunder, in reliance upon any Rights Certificate or certificate for the Preferred Shares or Common Shares or for other securities of the Company, instrument of assignment or transfer, power of attorney, endorsement, affidavit, letter, notice, direction, consent, certificate, statement or other paper or document reasonably believed by it to be genuine and to be signed, executed and, where necessary, verified or acknowledged, by the proper Person or Persons, or otherwise upon the advice of counsel as set forth in Section 20 hereof. The Rights Agent shall not be deemed to have knowledge of any event of which it was supposed to

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receive notice thereof hereunder, and the Rights Agent shall be fully protected and shall incur no liability for failing to take any action in connection therewith unless and until it has received such notice.

#### Section 19. Merger or Consolidation or Change of Name of Rights Agent.

(a) Any Person into which the Rights Agent or any successor Rights Agent may be merged or with which it may be consolidated, or any Person resulting from any merger or consolidation to which the Rights Agent or any successor Rights Agent shall be a party, or any Person succeeding to the business of the Rights Agent or any successor Rights Agent, shall be the successor to the Rights Agent under this Agreement without the execution or filing of any paper or any further act on the part of any of the parties hereto; provided, however, that such Person would be eligible for appointment as a successor Rights Agent under the provisions of Section 21 hereof. In case at the time such successor Rights Agent shall succeed to the agency created by this Agreement, any of the Rights Certificates shall have been countersigned but not delivered, any such successor Rights Agent may adopt the countersignature of the predecessor Rights Agent and deliver such Rights Certificates so countersigned; and in case at that time any of the Rights Certificates shall not have been countersigned, any successor Rights Agent may countersign such Rights Certificates either in the name of the predecessor Rights Agent or in the name of the successor Rights Agent; and in all such cases such Rights Certificates shall have the full force provided in the Rights Certificates and in this Agreement.

(b) In case at any time the name of the Rights Agent shall be changed and at such time any of the Rights Certificates shall have been countersigned but not delivered, the Rights Agent may adopt the countersignature under its prior name and deliver Rights Certificates so countersigned; and in case at that time any of the Rights Certificates shall not have been countersigned, the Rights Agent may countersign such Rights Certificates either in its prior name or in its changed name; and in all such cases such Rights Certificates shall have the full force provided in the Rights Certificates and in this Agreement.

#### Section 20. Duties of Rights Agent. The Rights Agent undertakes to

perform only the duties and obligations expressly imposed by this Agreement (and no implied duties) upon the following terms and conditions, by all of which the Company and the holders of Rights Certificates, by their acceptance thereof, shall be bound:

(a) The Rights Agent may consult with legal counsel (who may be legal counsel for the Company or any employee of the Rights Agent), and the advice or opinion of such counsel shall be full and complete authorization and protection to the Rights Agent and the Rights Agent shall incur no liability for or in respect of any action taken or omitted by it in accordance with such advice or opinion.

(b) Whenever in the performance of its duties under this Agreement the Rights Agent shall deem it necessary or desirable that any fact or matter (including, without limitation, the identity of any Acquiring Person and the determination of Current Per Share Market Price) be proved or established by the Company prior to taking, suffering or omitting any action hereunder,

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such fact or matter (unless other evidence in respect thereof be herein specifically prescribed) may be deemed to be conclusively proved and established by a certificate signed by any one of the Chairman of the Board, the Chief Executive Officer, the President, any Vice President, the Chief Financial Officer, the Secretary or any Assistant Secretary of the Company and delivered to the Rights Agent; and such certificate shall be full and complete authorization and protection to the Rights Agent and the Rights Agent shall incur no liability for or in respect of any action taken, suffered or omitted by it under the provisions of this Agreement in reliance upon such certificate.

(c) The Rights Agent shall be liable hereunder to the Company and any other Person only for its own gross negligence, bad faith or willful misconduct (which gross negligence, bad faith or willful misconduct must be determined by a final, non-appealable order, judgment, decree or ruling of a court of competent jurisdiction). Anything to the contrary notwithstanding, in no event shall the Rights Agent be liable for special, punitive, indirect, consequential or incidental loss or damage of any kind whatsoever (including, but not limited to, lost profits) even if the Rights Agent has been advised of the likelihood of such loss or damage. Any and all liability of the Rights Agent under this Agreement will be limited to the amount of fees paid by the Company to the Rights Agent pursuant to this Agreement.

(d) The Rights Agent shall not be liable for or by reason of any of the statements of fact or recitals contained in this Agreement or in the Rights Certificates (except its countersignature thereof) or be required to verify the same, but all such statements and recitals are and shall be deemed to have been made by the Company only.

(e) The Rights Agent shall not have any liability for, or be under any responsibility in respect of, the validity of this Agreement or the execution and delivery hereof (except the due execution hereof by the Rights Agent) or in respect of the validity or execution of any Rights Certificate (except its countersignature thereof); nor shall it be responsible for any breach by the Company of any covenant or condition contained in this Agreement or in any Rights Certificate; nor shall it be responsible for any change in the exercisability of the Rights (including the Rights becoming null and void pursuant to Section 7(e) hereunder), or any change or any adjustment in the terms of the Rights (including the manner, method or amount thereof) provided for in Sections 3, 11, 13, 23 or 24, or the ascertaining of the existence of facts that would require any such change or adjustment (except with respect to the exercise of Rights evidenced by Rights Certificates after receipt by the Rights Agent of a certificate furnished pursuant to Section 12 describing such change or adjustment, upon which certificate the Rights Agent may rely); nor shall it by any act hereunder be deemed to make any representation or warranty as to the authorization or reservation of any Preferred Shares to be issued pursuant to this Agreement or any Rights Certificate or as to whether any Preferred Shares will, when issued, be validly authorized and issued, fully paid and nonassessable.

(f) The Company agrees that it will perform, execute, acknowledge and deliver or cause to be performed, executed, acknowledged and delivered all such further and other acts, instruments and assurances as may reasonably be required by the Rights Agent for the carrying out or performing by the Rights

Agent of the provisions of this Agreement.

(g) The Rights Agent is hereby authorized and directed to accept instructions with respect to the performance of its duties hereunder from any one of the Chairman of the Board, the Chief Executive Officer, the President, any Vice President, the Chief Financial Officer, the Secretary

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or any Assistant Secretary of the Company, and to apply to such officers for advice or instructions in connection with its duties and such instructions shall be full authorization and protection to the Rights Agent, and the Rights Agent shall not be liable for any action taken, suffered or omitted by it in accordance with instructions of any such officer or for any delay in acting while waiting for those instructions. Any application by the Rights Agent for written instructions from the Company may, at the option of the Rights Agent, set forth in writing any action proposed to be taken, suffered or omitted by the Rights Agent under this Rights Agreement and the date on and/or after which such action shall be taken or such omission shall be effective. The Rights Agent shall not be liable for any action taken or suffered by, or omission of, the Rights Agent in accordance with a proposal included in any such application on or after the date specified in such application (which date shall not be less than five (5) Business Days after the date on which any officer of the Company actually receives such application, unless any such officer shall have consented in writing to an earlier date) unless, prior to taking any such action (or the effective date in the case of an omission), the Rights Agent shall have received written instructions in response to such application specifying the action to be taken, suffered or omitted.

(h) The Rights Agent and any stockholder, Affiliate, director, officer or employee of the Rights Agent may buy, sell or deal in any of the Rights or other securities of the Company or become pecuniarily interested in any transaction in which the Company may be interested, or contract with or lend money to the Company or otherwise act as fully and freely as though it were not Rights Agent under this Agreement. Nothing herein shall preclude the Rights Agent from acting in any other capacity for the Company or for any other legal entity.

(i) The Rights Agent may execute and exercise any of the rights or powers hereby vested in it or perform any duty hereunder either itself (through its directors, officers and employees) or by or through its attorneys or agents, and the Rights Agent shall not be answerable or accountable for any act, default, neglect or misconduct of any such attorneys or agents or for any loss to the Company or any other Person resulting from any such act, default, neglect or misconduct, absent gross negligence or bad faith in the selection and continued employment thereof (which gross negligence or bad faith must be determined by a final, non-appealable order, judgment, decree or ruling of a court of competent jurisdiction).

(j) No provision of this Agreement shall require the Rights Agent to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties hereunder or in the exercise of its rights if it believes that repayment of such funds or adequate indemnification against such risk or liability is not reasonably assured to it.

(k) If, with respect to any Rights Certificate surrendered to the Rights Agent for exercise or transfer, the certificate attached to the form of assignment or form of election to purchase, as the case may be, has either not been completed or indicates an affirmative response to clause 1 and/or 2 thereof, the Rights Agent shall not take any further action with respect to such requested exercise or transfer without first consulting with the Company.

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Section 21. Change of Rights Agent. The Rights Agent or any successor Rights Agent may resign and be discharged from its duties under this Agreement upon thirty (30) days' notice in writing mailed to the Company and to each transfer agent of the Preferred Shares or the Common Shares known to the Rights Agent by registered or certified mail, and to the holders of the Rights Certificates by first-class mail. The Company may remove the Rights Agent or any successor Rights Agent upon thirty (30) days' notice in writing, mailed to the Rights Agent or successor Rights Agent, as the case may be, and to each transfer



agent of the Preferred Shares or the Common Shares by registered or certified mail, and to the holders of the Rights Certificates by first-class mail. If the Rights Agent shall resign or be removed or shall otherwise become incapable of acting, the Company shall appoint a successor to the Rights Agent. If the Company shall fail to make such appointment within a period of thirty (30) days after giving notice of such removal or after it has been notified in writing of such resignation or incapacity by the resigning or incapacitated Rights Agent or by the holder of a Rights Certificate (who shall, with such notice, submit his or her Rights Certificate for inspection by the Company), then the registered holder of any Rights Certificate may apply to any court of competent jurisdiction for the appointment of a new Rights Agent. Any successor Rights Agent, whether appointed by the Company or by such a court, shall be (a) a Person organized and doing business under the laws of the United States or of any state of the United States, in good standing, which is authorized under such laws to exercise corporate trust or stockholder services powers, or (b) an Affiliate of such Person. After appointment, the successor Rights Agent shall be vested with the same powers, rights, duties and responsibilities as if it had been originally named as Rights Agent without further act or deed; but the predecessor Rights Agent shall deliver and transfer to the successor Rights Agent any property at the time held by it hereunder, and execute and deliver any further assurance, conveyance, act or deed necessary for the purpose. Not later than the effective date of any such appointment, the Company shall file notice thereof in writing with the predecessor Rights Agent and each transfer agent of the Preferred Shares or the Common Shares, and mail a notice thereof in writing to the registered holders of the Rights Certificates. Failure to give any notice provided for in this Section 21, however, or any defect therein, shall not affect the legality or validity of the resignation or removal of the Rights Agent or the appointment of the successor Rights Agent, as the case may be.

Section 22. Issuance of New Rights Certificates. Notwithstanding any of the provisions of this Agreement or of the Rights to the contrary, the Company may, at its option, issue new Rights Certificates evidencing Rights in such form as may be approved by its Board of Directors to reflect any adjustment or change in the Exercise Price and the number or kind or class of shares or other securities or property purchasable under the Rights Certificates made in accordance with the provisions of this Agreement. In addition, in connection with the issuance or sale of Common Shares following the Distribution Date and prior to the redemption or expiration of the Rights, the Company (a) shall, with respect to Common Shares so issued or sold pursuant to the exercise of stock options or under any employee plan or arrangement or upon the exercise, conversion or exchange of other securities of the Company outstanding at the date hereof or upon the exercise, conversion or exchange of securities hereinafter issued by the Company and (b) may, in any other case, if deemed necessary or appropriate by the Board of Directors of the Company, issue Rights Certificates representing the appropriate number of Rights in connection with such issuance or sale; provided, however, that (i) no such Rights Certificate shall be issued and this sentence shall be null

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and void ab initio if, and to the extent that, such issuance or this sentence would create a significant risk of or result in material adverse tax consequences to the Company or the Person to whom such Rights Certificate would be issued or would create a significant risk of or result in such options' or employee plans' or arrangements' failing to qualify for otherwise available special tax treatment and (ii) no such Rights Certificate shall be issued if, and to the extent that, appropriate adjustment shall otherwise have been made in lieu of the issuance thereof.

#### Section 23. Redemption.

(a) The Company may, at its option and with the approval of the Board of Directors, at any time prior to the Close of Business on the earlier of (i) the fifth day following the Shares Acquisition Date (or such later date as may be determined by action of the Company's Board of Directors and publicly announced by the Company) and (ii) the Final Expiration Date, redeem all but not less than all the then outstanding Rights at a redemption price of \$0.001 per Right, appropriately adjusted to reflect any stock split, stock dividend or similar transaction occurring after the date hereof (such redemption price being herein referred to as the "REDEMPTION PRICE") and the Company may, at its option, pay the Redemption Price either in Common Shares (based on the Current Per Share Market Price thereof at the time of redemption) or cash. Such redemption of the Rights by the Company may be made effective at such time, on

such basis and with such conditions as the Board of Directors in its sole discretion may establish. The date on which the Board of Directors elects to make the redemption effective shall be referred to as the "REDEMPTION DATE."

(b) Immediately upon the action of the Board of Directors of the Company ordering the redemption of the Rights, evidence of which shall have been filed with the Rights Agent, and without any further action and without any notice, the right to exercise the Rights will terminate and the only right thereafter of the holders of Rights shall be to receive the Redemption Price. The Company shall promptly give public notice of any such redemption; provided, however, that the failure to give, or any defect in, any such notice shall not affect the validity of such redemption. Within ten (10) days after the action of the Board of Directors ordering the redemption of the Rights, the Company shall give written notice of such redemption to the Rights Agent and the holders of the then outstanding Rights by mailing such notice to all such holders at their last addresses as they appear upon the registry books of the Rights Agent or, prior to the Distribution Date, on the registry books of the transfer agent for the Common Shares. Any notice which is mailed in the manner herein provided shall be deemed given, whether or not the holder receives the notice. Each such notice of redemption will state the method by which the payment of the Redemption Price will be made. Neither the Company nor any of its Affiliates or Associates may redeem, acquire or purchase for value any Rights at any time in any manner other than that specifically set forth in this Section 23 or in Section 24 hereof, and other than in connection with the purchase of Common Shares prior to the Distribution Date.

#### Section 24. Exchange.

(a) Subject to applicable laws, rules and regulations, and subject to subsection 24(c) below, the Company may, at its option, by action of the Board of Directors, at any time after the occurrence of a Triggering Event, exchange all or part of the then outstanding and exercisable

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Rights (which shall not include Rights that have become null and void pursuant to the provisions of Section 7(e) hereof) for Common Shares at an exchange ratio of one Common Share per Right, appropriately adjusted to reflect any stock split, stock dividend or similar transaction occurring after the date hereof (such exchange ratio being hereinafter referred to as the "EXCHANGE RATIO"). Notwithstanding the foregoing, the Board of Directors shall not be empowered to effect such exchange at any time after any Person (other than the Company, any Subsidiary of the Company, any employee benefit plan of the Company or any such Subsidiary, or any entity holding Common Shares for or pursuant to the terms of any such plan), together with all Affiliates and Associates of such Person, becomes the Beneficial Owner of 50% or more of the Common Shares then outstanding.

(b) Immediately upon the action of the Board of Directors ordering the exchange of any Rights pursuant to subsection 24(a) of this Section 24 and without any further action and without any notice, the right to exercise such Rights shall terminate and the only right thereafter of a holder of such Rights shall be to receive that number of Common Shares equal to the number of such Rights held by such holder multiplied by the Exchange Ratio. The Company shall give public notice of any such exchange (with prompt written notice thereof to the Rights Agent); provided, however, that the failure to give, or any defect in, such notice shall not affect the validity of such exchange. The Company shall mail a notice of any such exchange to all of the holders of such Rights at their last addresses as they appear upon the registry books of the Rights Agent. Any notice which is mailed in the manner herein provided shall be deemed given, whether or not the holder receives the notice. Each such notice of exchange will state the method by which the exchange of the Common Shares for Rights will be effected and, in the event of any partial exchange, the number of Rights which will be exchanged. Any partial exchange shall be effected pro rata based on the number of Rights (other than Rights which have become null and void pursuant to the provisions of Section 7(e) hereof) held by each holder of Rights.

(c) In the event that there shall not be sufficient Common Shares issued but not outstanding or authorized but unissued to permit any exchange of Rights as contemplated in accordance with Section 24(a), the Company shall either take such action as may be necessary to authorize additional Common Shares for issuance upon exchange of the Rights or alternatively, at the option

of a majority of the Board of Directors, with respect to each Right (i) pay cash in an amount equal to the Current Value (as hereinafter defined), in lieu of issuing Common Shares in exchange therefor, or (ii) issue debt or equity securities or a combination thereof, having a value equal to the Current Value, in lieu of issuing Common Shares in exchange for each such Right, where the value of such securities shall be determined by a nationally recognized investment banking firm selected by majority vote of the Board of Directors, or (iii) deliver any combination of cash, property, Common Shares and/or other securities having a value equal to the Current Value in exchange for each Right. For purposes of this Section 24(c) only, the Current Value shall mean the product of the Current Per Share Market Price of Common Shares on the date of the occurrence of the event described above in subsection (a), multiplied by the number of Common Shares for which the Right otherwise would be exchangeable if there were sufficient shares available. To the extent that the Company determines that some action need be taken pursuant to clauses (i), (ii) or (iii) of this Section 24(c), the Board of Directors may temporarily suspend the exercisability of the Rights

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for a period of up to sixty (60) days following the date on which the event described in Section 24(a) shall have occurred, in order to seek any authorization of additional Common Shares and/or to decide the appropriate form of distribution to be made pursuant to the above provision and to determine the value thereof. In the event of any such suspension, the Company shall issue a public announcement (with prompt written notice thereof to the Rights Agent) stating that the exercisability of the Rights has been temporarily suspended.

(d) The Company shall not be required to issue fractions of Common Shares or to distribute certificates which evidence fractional Common Shares. In lieu of such fractional Common Shares, there shall be paid to the registered holders of the Rights Certificates with regard to which such fractional Common Shares would otherwise be issuable, an amount in cash equal to the same fraction of the current market value of a whole Common Share (as determined pursuant to the second sentence of Section 1(j) hereof).

(e) The Company may, at its option, by majority vote of the Board of Directors, at any time before any Person has become an Acquiring Person, exchange all or part of the then outstanding Rights for rights of substantially equivalent value, as determined reasonably and with good faith by the Board of Directors based upon the advice of one or more nationally recognized investment banking firms.

(f) Immediately upon the action of the Board of Directors ordering the exchange of any Rights pursuant to subsection 24(e) of this Section 24 and without any further action and without any notice, the right to exercise such Rights shall terminate and the only right thereafter of a holder of such Rights shall be to receive that number of rights in exchange therefor as has been determined by the Board of Directors in accordance with subsection 24(e) above. The Company shall give public notice of any such exchange (with prompt written notice thereof to the Rights Agent); provided, however, that the failure to give, or any defect in, such notice shall not affect the validity of such exchange. The Company shall mail a notice of any such exchange to the Rights Agent and all of the holders of such Rights at their last addresses as they appear upon the registry books of the transfer agent for the Common Shares of the Company. Any notice which is mailed in the manner herein provided shall be deemed given, whether or not the holder receives the notice. Each such notice of exchange will state the method by which the exchange of the Rights will be effected.

#### Section 25. Notice of Certain Events.

(a) In case the Company shall propose to effect or permit to occur any Triggering Event or Section 13 Event, the Company shall give written notice thereof to (i) the Rights Agent, and (ii) each holder of Rights in accordance with Section 26, hereof at least twenty (20) days prior to the occurrence thereof.

(b) In case any Triggering Event or Section 13 Event shall occur, then, in any such case, the Company shall as soon as practicable thereafter give to each holder of a Rights Certificate and to the Rights Agent, in accordance with Section 26 hereof, a notice of the occurrence

of such event, which shall specify the event and the consequences of the event to holders of Rights under Sections 11(a) (ii) and 13 hereof.

Section 26. Notices. Notices or demands authorized by this Agreement to be given or made by the Rights Agent or by the holder of any Rights Certificate to or on the Company shall be sufficiently given or made if sent by first-class mail, postage prepaid, addressed (until another address is filed in writing with the Rights Agent) or by facsimile transmission as follows:

Harmonic Inc.  
549 Baltic Way  
Sunnyvale, California 94089  
Attention: Corporate Secretary  
Facsimile No.: (408) 542-2511

with a copy to:

Wilson Sonsini Goodrich & Rosati  
Professional Corporation  
650 Page Mill Road  
Palo Alto, California 94304-1050  
Attention: Jeffrey D. Saper, Esq.  
David J. Berger, Esq.  
Facsimile No.: (650) 493-9300

Subject to the provisions of Section 21 hereof, any notice or demand authorized by this Agreement to be given or made by the Company or by the holder of any Rights Certificate to or on the Rights Agent shall be sufficiently given or made if sent by first-class mail, postage prepaid, addressed (until another address is filed in writing with the Company) or by facsimile transmission as follows:

Mellon Investor Services LLC  
235 Montgomery Street, 23rd Floor  
San Francisco, California 94104  
Attention: Relationship Manager  
Facsimile No.: (415) 989-5241

with a copy to:

Mellon Investor Services LLC  
85 Challenger Road  
Ridgefield Park, New Jersey 07660-2108  
Attention: General Counsel  
Facsimile No.: (201) 296-4004

Notices or demands authorized by this Agreement to be given or made by the Company or the Rights Agent to the holder of any Rights Certificate shall be sufficiently given or made if sent by

first-class mail, postage prepaid, addressed to such holder at the address of such holder as shown on the registry books of the Company.

Section 27. Supplements and Amendments. Prior to the occurrence of a Distribution Date, the Company may supplement or amend this Agreement in any respect without the approval of any holders of Rights, subject to the other terms and conditions of this Agreement, and the Rights Agent shall, if the Company so directs, execute such supplement or amendment. From and after the occurrence of a Distribution Date, the Company and the Rights Agent may from time to time supplement or amend this Agreement without the approval of any holders of Rights in order to (i) cure any ambiguity, (ii) correct or supplement any provision contained herein which may be defective or inconsistent with any other provisions herein, (iii) shorten or lengthen any time period hereunder or (iv) to change or supplement the provisions hereunder in any manner that the Company may deem necessary or desirable and that shall not adversely affect the interests of the holders of Rights (other than an Acquiring Person or an Affiliate or Associate of an Acquiring Person); provided, this Agreement may not be supplemented or amended to lengthen, pursuant to clause (iii) of this

sentence, (A) a time period relating to when the Rights may be redeemed at such time as the Rights are not then redeemable or (B) any other time period unless such lengthening is for the purpose of protecting, enhancing or clarifying the rights of, and/or the benefits to, the holders of Rights (other than an Acquiring Person or an Affiliate or Associate of an Acquiring Person). Upon the delivery of a certificate from an appropriate officer of the Company that states that the proposed supplement or amendment is in compliance with the terms of this Section 27 and, provided that such supplement or amendment does not change or increase the Rights Agent's rights, duties, liabilities or obligations, the Rights Agent shall execute such supplement or amendment. Prior to the Distribution Date, the interests of the holders of Rights shall be deemed coincident with the interests of the holders of Common Shares.

Section 28. Successors. All the covenants and provisions of this Agreement by or for the benefit of the Company or the Rights Agent shall bind and inure to the benefit of their respective successors and assigns hereunder.

Section 29. Determinations and Actions by the Board of Directors, etc. For all purposes of this Agreement, any calculation of the number of Common Shares outstanding at any particular time, including for purposes of determining the particular percentage of such outstanding Common Shares of which any Person is the Beneficial Owner, shall be made in accordance with the last sentence of Rule 13d-3(d)(1)(i) of the General Rules and Regulations under the Exchange Act. The Board of Directors of the Company shall have the exclusive power and authority to administer this Agreement and to exercise all rights and powers specifically granted to the Board, or the Company, or as may be necessary or advisable in the administration of this Agreement, including, without limitation, the right and power (i) to interpret the provisions of this Agreement and (ii) to make all determinations and calculations deemed necessary or advisable for the administration of this Agreement (including a determination to redeem or not redeem the Rights or to amend the Agreement). All such actions, calculations, interpretations and determinations (including, for purposes of clause (y) below, all omissions with respect to the foregoing) which are done or made by the Board in good faith, shall (x) be final, conclusive and binding on the Company, the Rights

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Agent, the holders of the Rights Certificates and all other parties and (y) with respect to claims specifically arising from the Agreement, not subject the Board to any liability to the holders of the Rights. The Rights Agent shall always be entitled to assume that the Board of Directors of the Company acted in good faith and shall be fully protected and incur no liability in reliance thereon.

Section 30. Benefits of this Agreement. Nothing in this Agreement shall be construed to give to any Person other than the Company, the Rights Agent and the registered holders of the Rights Certificates (and, prior to the Distribution Date, the Common Shares) any legal or equitable right, remedy or claim pursuant to this Agreement; but this Agreement shall be for the sole and exclusive benefit of the Company, the Rights Agent and the registered holders of the Rights Certificates (and, prior to the Distribution Date, the Common Shares).

Section 31. Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction or other authority to be invalid, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions of this Agreement shall remain in full force and effect and shall in no way be affected, impaired or invalidated; provided, however, that notwithstanding anything in this Agreement to the contrary, if any such term, provision, covenant or restriction is held by such court or authority to be invalid, void or unenforceable and the Board of Directors of the Company determines in its good faith judgment that severing the invalid language from this Agreement would adversely affect the purpose or effect of this Agreement, the right of redemption set forth in Section 23 hereof shall be reinstated (with prompt written notice thereof to the Rights Agent) and shall not expire until the Close of Business on the tenth day following the date of such determination by the Board of Directors.

Section 32. Governing Law. This Agreement and each Right and each Rights Certificate issued hereunder shall be deemed to be a contract made under the laws of the State of Delaware and for all purposes shall be governed by and construed in accordance with the laws of such State applicable to contracts to be made and performed entirely within such State; provided, however, that all

provisions regarding the rights, duties and obligations of the Rights Agent shall be governed by and construed in accordance with the laws of the State of New York applicable to contracts made and to be performed entirely within such State.

Section 33. Counterparts. This Agreement may be executed in any number of counterparts and each of such counterparts shall for all purposes be deemed to be an original, and all such counterparts shall together constitute but one and the same instrument.

Section 34. Descriptive Headings. Descriptive headings of the several Sections of this Agreement are inserted for convenience only and shall not control or affect the meaning or construction of any of the provisions hereof.

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IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the day and year first above written.

"COMPANY" HARMONIC INC.  
By: /s/ ROBIN N. DICKSON  
-----  
Name: Robin N. Dickson  
-----  
Title: Chief Executive Officer  
and Assistant Secretary  
-----

"RIGHTS AGENT" MELLON INVESTOR SERVICES LLC  
By: /s/ JOSEPH W. THATCHER, JR.  
-----  
Name: Joseph W. Thatcher, Jr.  
-----  
Title: Vice President  
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EXHIBIT A

CERTIFICATE OF DESIGNATION OF RIGHTS, PREFERENCES AND PRIVILEGES OF SERIES A PARTICIPATING PREFERRED STOCK OF HARMONIC INC.

The undersigned, Robin N. Dickson does hereby certify:

1. That he/she is duly elected and acting Chief Financial Officer and Assistant Secretary of Harmonic Inc., a Delaware corporation (the "CORPORATION").

2. That pursuant to the authority conferred upon the Board of Directors by the Amended and Restated Certificate of Incorporation of the said Corporation, the said Board of Directors of the Corporation on July 23, 2002 adopted the following resolutions creating a series of Preferred Stock designated as Series A Participating Preferred Stock:

"RESOLVED, that pursuant to the authority vested in the Board of Directors of the corporation by the Amended and Restated Certificate of Incorporation, the Board of Directors does hereby provide for the issue of a series of Preferred Stock of the Corporation and does hereby fix and herein state and express the designations, powers, preferences and relative and other special rights and the qualifications, limitations and restrictions of such series of Preferred Stock as follows:

Section 1. Designation and Amount. The shares of such series shall be designated as "SERIES A PARTICIPATING PREFERRED STOCK." The Series A Participating Preferred Stock shall have a par value of \$0.001 per share, and

the number of shares constituting such series shall be 100,000.

Section 2. Proportional Adjustment. In the event that the Corporation shall at any time after the issuance of any share or shares of Series A Participating Preferred Stock (i) declare any dividend on Common Stock of the Corporation ("COMMON STOCK") payable in shares of Common Stock, (ii) subdivide the outstanding Common Stock or (iii) combine the outstanding Common Stock into a smaller number of shares, then in each such case the Corporation shall simultaneously effect a proportional adjustment to the number of outstanding shares of Series A Participating Preferred Stock.

Section 3. Dividends and Distributions.

(a) Subject to the prior and superior right of the holders of any shares of any series of Preferred Stock ranking prior and superior to the shares of Series A Participating Preferred Stock with respect to dividends, the holders of shares of Series A Participating Preferred Stock shall be entitled to receive when, as and if declared by the Board of Directors out of funds legally available for the purpose, quarterly dividends payable in cash on the last day of January, April, July, and October in each year (each such date being referred to herein as a "QUARTERLY DIVIDEND PAYMENT DATE"), commencing on the first Quarterly Dividend Payment Date after the first issuance of a share or fraction of a share of Series A Participating Preferred Stock, in an amount per share (rounded to the nearest cent) equal to 1,000 times the aggregate per share amount of all cash dividends, and

1,000 times the aggregate per share amount (payable in kind) of all non-cash dividends or other distributions other than a dividend payable in shares of Common Stock or a subdivision of the outstanding shares of Common Stock (by reclassification or otherwise), declared on the Common Stock since the immediately preceding Quarterly Dividend Payment Date, or, with respect to the first Quarterly Dividend Payment Date, since the first issuance of any share or fraction of a share of Series A Participating Preferred Stock.

(b) The Corporation shall declare a dividend or distribution on the Series A Participating Preferred Stock as provided in paragraph (a) above immediately after it declares a dividend or distribution on the Common Stock (other than a dividend payable in shares of Common Stock).

(c) Dividends shall begin to accrue on outstanding shares of Series A Participating Preferred Stock from the Quarterly Dividend Payment Date next preceding the date of issue of such shares of Series A Participating Preferred Stock, unless the date of issue of such shares is prior to the record date for the first Quarterly Dividend Payment Date, in which case dividends on such shares shall begin to accrue from the date of issue of such shares, or unless the date of issue is a Quarterly Dividend Payment Date or is a date after the record date for the determination of holders of shares of Series A Participating Preferred Stock entitled to receive a quarterly dividend and before such Quarterly Dividend Payment Date, in either of which events such dividends shall begin to accrue from such Quarterly Dividend Payment Date. Accrued but unpaid dividends shall not bear interest. Dividends paid on the shares of Series A Participating Preferred Stock in an amount less than the total amount of such dividends at the time accrued and payable on such shares shall be allocated pro rata on a share-by-share basis among all such shares at the time outstanding. The Board of Directors may fix a record date for the determination of holders of shares of Series A Participating Preferred Stock entitled to receive payment of a dividend or distribution declared thereon, which record date shall be no more than 30 days prior to the date fixed for the payment thereof.

Section 4. Voting Rights. The holders of shares of Series A Participating Preferred Stock shall have the following voting rights:

(a) Each share of Series A Participating Preferred Stock shall entitle the holder thereof to 1,000 votes on all matters submitted to a vote of the stockholders of the Corporation.

(b) Except as otherwise provided herein or by law, the holders of shares of Series A Participating Preferred Stock and the holders of shares of Common Stock shall vote together as one class on all matters submitted to a vote of stockholders of the Corporation.

(c) Except as required by law, the holders of Series A

Participating Preferred Stock shall have no special voting rights and their consent shall not be required (except to the extent that they are entitled to vote with holders of Common Stock as set forth herein) for taking any corporate action.

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#### Section 5. Certain Restrictions.

(a) The Corporation shall not declare any dividend on, make any distribution on, or redeem or purchase or otherwise acquire for consideration any shares of Common Stock after the first issuance of a share or fraction of a share of Series A Participating Preferred Stock unless concurrently therewith it shall declare a dividend on the Series A Participating Preferred Stock as required by Section 3 hereof.

(b) Whenever quarterly dividends or other dividends or distributions payable on the Series A Participating Preferred Stock as provided in Section 3 are in arrears, thereafter and until all accrued and unpaid dividends and distributions, whether or not declared, on shares of Series A Participating Preferred Stock outstanding shall have been paid in full, the Corporation shall not

(i) declare or pay dividends on, make any other distributions on, or redeem or purchase or otherwise acquire for consideration any shares of stock ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A Participating Preferred Stock;

(ii) declare or pay dividends on, or make any other distributions on any shares of stock ranking on a parity (either as to dividends or upon liquidation, dissolution or winding up) with the Series A Participating Preferred Stock, except dividends paid ratably on the Series A Participating Preferred Stock and all such parity stock on which dividends are payable or in arrears in proportion to the total amounts to which the holders of all such shares are then entitled;

(iii) redeem or purchase or otherwise acquire for consideration shares of any stock ranking on a parity (either as to dividends or upon liquidation, dissolution or winding up) with the Series A Participating Preferred Stock, provided that the Corporation may at any time redeem, purchase or otherwise acquire shares of any such parity stock in exchange for shares of any stock of the Corporation ranking junior (either as to dividends or upon dissolution, liquidation or winding up) to the Series A Participating Preferred Stock;

(iv) purchase or otherwise acquire for consideration any shares of Series A Participating Preferred Stock, or any shares of stock ranking on a parity with the Series A Participating Preferred Stock, except in accordance with a purchase offer made in writing or by publication (as determined by the Board of Directors) to all holders of such shares upon such terms as the Board of Directors, after consideration of the respective annual dividend rates and other relative rights and preferences of the respective series and classes, shall determine in good faith will result in fair and equitable treatment among the respective series or classes.

(c) The Corporation shall not permit any subsidiary of the Corporation to purchase or otherwise acquire for consideration any shares of stock of the Corporation unless the Corporation could, under paragraph (a) of this Section 5, purchase or otherwise acquire such shares at such time and in such manner.

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Section 6. Reacquired Shares. Any shares of Series A Participating Preferred Stock purchased or otherwise acquired by the Corporation in any manner whatsoever shall be retired and canceled promptly after the acquisition thereof. All such shares shall upon their cancellation become authorized but unissued shares of Preferred Stock and may be reissued as part of a new series of Preferred Stock to be created by resolution or resolutions of the Board of Directors, subject to the conditions and restrictions on issuance set forth herein and in the Amended and Restated Certificate of Incorporation, as then



amended.

Section 7. Liquidation, Dissolution or Winding Up. Upon any liquidation, dissolution or winding up of the Corporation, the holders of shares of Series A Participating Preferred Stock shall be entitled to receive an aggregate amount per share equal to 1,000 times the aggregate amount to be distributed per share to holders of shares of Common Stock plus an amount equal to any accrued and unpaid dividends on such shares of Series A Participating Preferred Stock.

Section 8. Consolidation, Merger, etc. In case the Corporation shall enter into any consolidation, merger, combination or other transaction in which the shares of Common Stock are exchanged for or changed into other stock or securities, cash and/or any other property, then in any such case the shares of Series A Participating Preferred Stock shall at the same time be similarly exchanged or changed in an amount per share equal to 1,000 times the aggregate amount of stock, securities, cash and/or any other property (payable in kind), as the case may be, into which or for which each share of Common Stock is changed or exchanged.

Section 9. No Redemption. The shares of Series A Participating Preferred Stock shall not be redeemable.

Section 10. Ranking. The Series A Participating Preferred Stock shall rank junior to all other series of the Corporation's Preferred Stock as to the payment of dividends and the distribution of assets, unless the terms of any such series shall provide otherwise.

Section 11. Amendment. The Amended and Restated Certificate of Incorporation of the Corporation shall not be further amended in any manner which would materially alter or change the powers, preference or special rights of the Series A Participating Preferred Stock so as to affect them adversely without the affirmative vote of the holders of a majority of the outstanding shares of Series A Participating Preferred Stock, voting separately as a series.

Section 12. Fractional Shares. Series A Participating Preferred Stock may be issued in fractions of a share which shall entitle the holder, in proportion to such holder's fractional shares, to exercise voting rights, receive dividends, participate in distributions and to have the benefit of all other rights of holders of Series A Participating Preferred Stock.

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RESOLVED FURTHER, that the President, Chief Executive Officer or any Vice President and the Secretary or any Assistant Secretary of this corporation be, and they hereby are, authorized and directed to prepare and file a Certificate of Designation of Rights, Preferences and Privileges in accordance with the foregoing resolution and the provisions of Delaware law and to take such actions as they may deem necessary or appropriate to carry out the intent of the foregoing resolution."

I further declare under penalty of perjury that the matters set forth in the foregoing Certificate of Designation are true and correct of my own knowledge.

Executed at Sunnyvale, California on July 24, 2002.

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Robin N. Dickson  
Chief Financial Officer and Assistant Secretary  
Harmonic Inc.

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EXHIBIT B

FORM OF RIGHTS CERTIFICATE

NOT EXERCISABLE AFTER THE EARLIER OF (i) AUGUST 7, 2012, (ii) THE DATE TERMINATED BY THE COMPANY OR (iii) THE DATE THE COMPANY EXCHANGES THE RIGHTS PURSUANT TO THE RIGHTS AGREEMENT. THE RIGHTS ARE SUBJECT TO REDEMPTION, AT THE OPTION OF THE COMPANY, AT \$0.001 PER RIGHT ON THE TERMS SET FORTH IN THE RIGHTS AGREEMENT. UNDER CERTAIN CIRCUMSTANCES, RIGHTS BENEFICIALLY OWNED BY AN ACQUIRING PERSON OR AN AFFILIATE OR ASSOCIATE OF AN ACQUIRING PERSON (AS SUCH TERMS ARE DEFINED IN THE RIGHTS AGREEMENT) AND ANY SUBSEQUENT HOLDER OF SUCH RIGHTS MAY BECOME NULL AND VOID. [THE RIGHTS REPRESENTED BY THIS RIGHTS CERTIFICATE ARE OR WERE BENEFICIALLY OWNED BY A PERSON WHO WAS OR BECAME AN ACQUIRING PERSON OR AN AFFILIATE OR ASSOCIATE OF AN ACQUIRING PERSON (AS SUCH TERMS ARE DEFINED IN THE RIGHTS AGREEMENT). ACCORDINGLY, THIS RIGHTS CERTIFICATE AND THE RIGHTS REPRESENTED HEREBY MAY BECOME NULL AND VOID IN THE CIRCUMSTANCES SPECIFIED IN SECTION 7(e) OF SUCH RIGHTS AGREEMENT.]\*

## RIGHTS CERTIFICATE

HARMONIC INC.

This certifies that \_\_\_\_\_, or registered assigns, is the registered owner of the number of Rights set forth above, each of which entitles the owner thereof, subject to the terms, provisions and conditions of the Rights Agreement dated as of July 24, 2002, (the "RIGHTS AGREEMENT"), between Harmonic Inc., a Delaware corporation (the "COMPANY"), and Mellon Investor Services LLC (the "RIGHTS AGENT"), to purchase from the Company at any time after the Distribution Date (as such term is defined in the Rights Agreement) and prior to 5:00 P.M., California time, on August 7, 2012 at the office of the Rights Agent designated for such purpose, or at the office of its successor as Rights Agent, one one-thousandth (0.001) of a fully paid and

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\* The portion of the legend in bracket shall be inserted only if applicable and shall replace the preceding sentence.

non-assessable share of Series A Participating Preferred Stock, par value \$0.001 per share (the "PREFERRED SHARES"), of the Company, at an Exercise Price of Twenty-Five Dollars (\$25.00) per one-thousandth (0.001) of a Preferred Share (the "EXERCISE PRICE"), upon presentation and surrender of this Rights Certificate with the Form of Election to Purchase and related Certificate duly executed. The number of Rights evidenced by this Rights Certificate (and the number of one-thousandths (0.001) of a Preferred Share which may be purchased upon exercise hereof) set forth above are the number and Exercise Price as of August 7, 2002 based on the Preferred Shares as constituted at such date. As provided in the Rights Agreement, the Exercise Price and the number and kind of Preferred Shares or other securities which may be purchased upon the exercise of the Rights evidenced by this Rights Certificate are subject to modification and adjustment upon the happening of certain events.

This Rights Certificate is subject to all of the terms, provisions and conditions of the Rights Agreement, which terms, provisions and conditions are hereby incorporated herein by reference and made a part hereof and to which Rights Agreement reference is hereby made for a full description of the rights, limitations of rights, obligations, duties and immunities hereunder of the Rights Agent, the Company and the holders of the Rights Certificates, which limitations of rights include the temporary suspension of the exercisability of such Rights under the specific circumstances set forth in the Rights Agreement. Copies of the Rights Agreement are on file at the principal executive offices of the Company and the above-mentioned office of the Rights Agent.

Subject to the provisions of the Rights Agreement, the Rights evidenced by this Rights Certificate (i) may be redeemed by the Company, at its option, at a redemption price of \$0.001 per Right or (ii) may be exchanged by the Company in whole or in part for Common Shares, substantially equivalent rights or other consideration as determined by the Company.

This Rights Certificate, with or without other Rights Certificates, upon surrender at the office of the Rights Agent designated for such purpose, may be exchanged for another Rights Certificate or Rights Certificates of like tenor

and date evidencing Rights entitling the holder to purchase a like aggregate amount of securities as the Rights evidenced by the Rights Certificate or Rights Certificates surrendered shall have entitled such holder to purchase. If this Rights Certificate shall be exercised in part, the holder shall be entitled to receive upon surrender hereof another Rights Certificate or Rights Certificates for the number of whole Rights not exercised.

No fractional portion of less than one one-thousandth (0.001) of a Preferred Share will be issued upon the exercise of any Right or Rights evidenced hereby but in lieu thereof a cash payment will be made, as provided in the Rights Agreement.

No holder of this Rights Certificate, as such, shall be entitled to vote or receive dividends or be deemed for any purpose the holder of the Preferred Shares or of any other securities of the Company which may at any time be issuable on the exercise hereof, nor shall anything contained in the Rights Agreement or herein be construed to confer upon the holder hereof, as such, any of the rights of a stockholder of the Company or any right to vote for the election of directors or upon any matter submitted to stockholders at any meeting thereof, or to give or withhold consent to any corporate action, or to receive notice of meetings or other actions affecting stockholders (except as

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provided in the Rights Agreement), or to receive dividends or subscription rights, or otherwise, until the Right or Rights evidenced by this Rights Certificate shall have been exercised as provided in the Rights Agreement.

This Rights Certificate shall not be valid or obligatory for any purpose until it shall have been countersigned by the Rights Agent.

WITNESS the facsimile signature of the proper officers of the Company and its corporate seal. Dated as of \_\_\_\_\_, \_\_\_\_.

ATTEST: HARMONIC INC.  
\_\_\_\_\_  
Secretary By: \_\_\_\_\_  
Its: \_\_\_\_\_

Countersigned:  
MELLON INVESTOR SERVICES LLC  
as Rights Agent  
By: \_\_\_\_\_  
Its: \_\_\_\_\_

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FORM OF REVERSE SIDE OF RIGHTS CERTIFICATE

FORM OF ASSIGNMENT

(To be executed by the registered holder if such holder desires to transfer the Rights Certificate)

FOR VALUE RECEIVED \_\_\_\_\_ hereby sells, assigns and transfers unto

\_\_\_\_\_  
(Please print name and address of transferee)

\_\_\_\_\_  
this Rights Certificate, together with all right, title and interest therein, and does hereby irrevocably constitute and appoint \_\_\_\_\_

Attorney, to transfer the within Rights Certificate on the books of the within-named Company, with full power of substitution.

Dated: \_\_\_\_\_, \_\_\_\_

\_\_\_\_\_  
Signature

Signature Guaranteed:

Signatures must be guaranteed by an "Eligible Guarantor Institution" (with membership in an approved signature guarantee medallion program) pursuant to Rule 17Ad-15 of the Securities Exchange Act of 1934, as amended.

CERTIFICATE

The undersigned hereby certifies by checking the appropriate boxes that:

(1) this Rights Certificate [ ] is [ ] is not being sold, assigned and transferred by or on behalf of a Person who is or was an Acquiring Person, or an Affiliate or Associate of any such Person (as such terms are defined in the Rights Agreement);

(2) after due inquiry and to the best knowledge of the undersigned, it [ ] did [ ] did not acquire the Rights evidenced by this Rights Certificate from any Person who is, was or subsequently became an Acquiring Person or an Affiliate or Associate of any such Person.

Dated: \_\_\_\_\_, \_\_\_\_

\_\_\_\_\_  
Signature

Signature Guaranteed:

Signatures must be guaranteed by an "Eligible Guarantor Institution" (with membership in an approved signature guarantee medallion program) pursuant to Rule 17Ad-15 of the Securities Exchange Act of 1934, as amended.

FORM OF REVERSE SIDE OF RIGHTS CERTIFICATE -- CONTINUED

FORM OF ELECTION TO PURCHASE

(To be executed if holder desires to exercise the Rights Certificate)

To: \_\_\_\_\_

The undersigned hereby irrevocably elects to exercise \_\_\_\_\_ Rights represented by this Rights Certificate to purchase the number of one-thousandths (0.001) of a Preferred Share issuable upon the exercise of such Rights and requests that certificates for such number of one-thousandths (0.001) of a Preferred Share issued in the name of:

Please insert social security or other identifying number

\_\_\_\_\_  
(Please print name and address)

If such number of Rights shall not be all the Rights evidenced by this Rights Certificate, a new Rights Certificate for the balance remaining of such Rights shall be registered in the name of and delivered to:

Please insert social security  
or other identifying number

-----  
(Please print name and address)  
-----

Dated: \_\_\_\_\_, \_\_\_\_\_

\_\_\_\_\_  
Signature

Signature Guaranteed:

Signatures must be guaranteed by an "Eligible Guarantor Institution"  
(with membership in an approved signature guarantee medallion program) pursuant  
to Rule 17Ad-15 of the Securities Exchange Act of 1934, as amended.

#### CERTIFICATE

The undersigned hereby certifies by checking the appropriate boxes that:

(1) the Rights evidenced by this Rights Certificate [ ] are [ ] are not  
being exercised by or on behalf of a Person who is or was an Acquiring Person or  
an Affiliate or Associate of any such Person (as such terms are defined in the  
Rights Agreement);

(2) after due inquiry and to the best knowledge of the undersigned, it  
[ ] did [ ] did not acquire the Rights evidenced by this Rights Certificate from  
any Person who is, was or subsequently became an Acquiring Person or an  
Affiliate or Associate of any such Person.

Dated: \_\_\_\_\_, \_\_\_\_\_

\_\_\_\_\_  
Signature

Signature Guaranteed:

Signatures must be guaranteed by an "Eligible Guarantor Institution"  
(with membership in an approved signature guarantee medallion program) pursuant  
to Rule 17Ad-15 of the Securities Exchange Act of 1934, as amended.

FORM OF REVERSE SIDE OF RIGHTS CERTIFICATE -- CONTINUED

#### NOTICE

The signature in the foregoing Forms of Assignment and Election  
must conform to the name as written upon the face of this Rights Certificate in  
every particular, without alteration or enlargement or any change whatsoever.

#### EXHIBIT C

STOCKHOLDER RIGHTS PLAN  
HARMONIC INC.

#### SUMMARY OF RIGHTS

DISTRIBUTION AND  
TRANSFER OF RIGHTS;  
RIGHTS CERTIFICATE:

The Board of Directors has declared a dividend of one  
Right for each share of Common Stock of Harmonic Inc.  
Right for each share of Common Stock of Harmonic Inc.

(the "COMPANY") outstanding. Prior to the Distribution Date referred to below, the Rights will be evidenced by and trade with the certificates for the Common Stock. After the Distribution Date, the Company will mail Rights certificates to the Company's stockholders and the Rights will become transferable apart from the Common Stock.

DISTRIBUTION DATE: Rights will separate from the Common Stock and become exercisable following (a) the tenth day (or such later date as may be determined by the Company's Board of Directors) after a person or group acquires beneficial ownership of 15% or more of the Company's Common Stock or (b) the tenth business day (or such later date as may be determined by the Company's Board of Directors) after a person or group announces a tender or exchange offer, the consummation of which would result in ownership by a person or group of 15% or more of the Company's Common Stock.

PREFERRED STOCK PURCHASABLE UPON EXERCISE OF RIGHTS: After the Distribution Date, each Right will entitle the holder to purchase for \$25.00 (the "EXERCISE PRICE"), a fraction of a share of the Company's Preferred Stock with economic terms similar to that of one share of the Company's Common Stock.

FLIP-IN: If an acquirer (an "ACQUIRING PERSON") obtains 15% or more of the Company's Common Stock, then each Right (other than Rights owned by an Acquiring Person or its affiliates) will entitle the holder thereof to purchase, for the Exercise Price, a number of shares of the Company's Common Stock having a then-current market value of twice the Exercise Price.

FLIP-OVER: If, after an Acquiring Person obtains 15% or more of the Company's Common Stock, (a) the Company merges into another entity, (b) an acquiring entity merges into the Company or (c) the Company sells more than 50% of the Company's assets or earning power, then each Right (other than Rights owned by an Acquiring Person or its affiliates) will entitle the holder thereof to purchase, for the Exercise Price, a number of shares of Common Stock of the person engaging in the transaction having a then current market value of twice the Exercise Price.

EXCHANGE PROVISION: At any time after the date on which an Acquiring Person obtains 15% or more of the Company's Common Stock and prior to the acquisition by the Acquiring Person of 50% of the outstanding Common Stock, the Board of Directors of the Company may exchange the Rights (other than Rights owned by the Acquiring Person or its affiliates), in whole or in part, for shares of Common Stock of the Company at an exchange ratio of one share of Common Stock per Right (subject to adjustment).

REDEMPTION OF THE RIGHTS: Rights will be redeemable at the Company's option for \$0.001 per Right at any time on or prior to the fifth day (or such later date as may be determined by the Company's Board of Directors) after public announcement that a Person has acquired beneficial ownership of 15% or more of the Company's Common Stock (the "SHARES ACQUISITION DATE").

EXPIRATION OF THE RIGHTS: The Rights expire on the earliest of (a) August 7, 2012 or (b) exchange or redemption of the Rights as described above.

AMENDMENT OF TERMS OF RIGHTS: The terms of the Rights and the Rights Agreement may be amended in any respect without the consent of the Rights holders on or prior to the Distribution Date; thereafter, the terms of the Rights and the Rights Agreement may be amended without the consent of the

Rights holders in order to cure any ambiguities or to make changes which do not adversely affect the interests of Rights holders (other than the Acquiring Person).

VOTING RIGHTS: Rights will not have any voting rights.

ANTI-DILUTION PROVISIONS: Rights will have the benefit of certain customary anti-dilution provisions.

TAXES: The Rights distribution should not be taxable for federal income tax purposes. However, following an event which renders the Rights exercisable or upon redemption of the Rights, stockholders may recognize taxable income.

The foregoing is a summary of certain principal terms of the Stockholder Rights Plan only and is qualified in its entirety by reference to the Preferred Stock Rights Agreement dated as of July 24, 2002 between the Company and Mellon Investor Services LLC as Rights Agent (the "RIGHTS AGREEMENT"). The Rights Agreement may be amended from time to time. A copy of the Rights Agreement was filed with the Securities and Exchange Commission as an Exhibit to a Registration Statement on Form 8-A dated July 25, 2002. A copy of the Rights Agreement is available free of charge from the Company.

[HARMONIC LETTERHEAD]

FOR IMMEDIATE RELEASE

CONTACTS:	Robin N. Dickson	Michael Newman
	Chief Financial Officer	Investor Relations
	Harmonic Inc.	StreetConnect
	+1.408.542.2500	+1.408.542.2760

HARMONIC INC. ANNOUNCES ADOPTION OF A  
STOCKHOLDER RIGHTS PLAN

SUNNYVALE, CALIF.--JULY 24, 2002--Harmonic Inc. (Nasdaq: HLIT) today announced that its Board of Directors approved the adoption of a stockholder rights plan. Under the plan, Harmonic will issue a dividend of one right for each share of common stock of the company held by stockholders of record as of the close of business on August 7, 2002.

Each right will initially entitle stockholders to purchase a fractional share of the company's preferred stock. However, the rights are not immediately exercisable and will become exercisable only upon the occurrence of certain events. If a person or group acquires or announces a tender or exchange offer that would result in the acquisition of a certain percentage of the company's common stock while the stockholder rights plan remains in place, the rights will become exercisable, unless redeemed, by all rights holders except the acquiring person or group, for shares of the company or of the third-party acquiror having a value of twice the then-current exercise price of the rights.

ABOUT HARMONIC INC.

Harmonic Inc. is a leading provider of digital video, broadband optical networking and IP delivery systems to cable, satellite, telecom and broadcast network operators. Harmonic's open standards-based solutions for the headend through the last mile enable customers to develop new revenue sources and a competitive advantage by offering powerful interactive video, voice and data services such as video-on-demand, high definition digital television, telephony and Internet access.

Harmonic (Nasdaq: HLIT) is headquartered in Sunnyvale, California with R&D, sales and system integration centers worldwide. The Company's customers, including many of the world's largest communications providers, deliver services in virtually every country. Visit [www.harmonicinc.com](http://www.harmonicinc.com) for more information.