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To the Honorable Commissioner of Patents and Trademarks: FILED attached original documents or copy thereof.

<p>1. Name of conveying party(ies)</p> <p>Hirokazu NAGASAWA, Yoshitsugu NOMIYAMA, Masaaki KOJIMA</p> <p>Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>2. Name and address of receiving party(ies)</p> <p>Name: SONY CORPORATION 7-35 Kitashinagawa 6-chome Shinagawa-Ku, Tokyo 141-0001, Japan</p> <p>Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>3. Nature of conveyance:</p> <p><input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Security Agreement <input type="checkbox"/> Merger <input type="checkbox"/> Change of Name <input type="checkbox"/> Other</p> <p>Execution Date(s): <u>September 14, October 3 and September 18, 2000</u></p>	

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

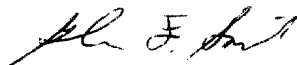
A. Patent Application No.(s) 09/604,632 filed June 27, 2000

Additional numbers attached? Yes No

<p>5. Name and address of party to whom correspondence concerning document should be mailed:</p> <p>Name: WILLIAM S. FROMMER</p> <p>Internal Address: FROMMER LAWRENCE & HAUG LLP</p> <p>Street Address: 745 FIFTH AVENUE</p> <p>City: <u>NEW YORK</u> State: <u>N.Y.</u> Zip: <u>10151</u></p>	<p>6. Total number of applications and patents involved <u>1</u></p> <p>7. Total fee (37 CFR 3.41) \$ <u>40.00</u></p> <p><input checked="" type="checkbox"/> Enclosed <input type="checkbox"/> Authorized to be charged to deposit account 50-0320</p> <p>8. Deposit account number: (Attach duplicate copy of this page if paying by deposit account)</p>
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GLENN F. SAVIT  October 17, 2000

Name of Person Signing Signature Date

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ASSIGNMENT

WHEREAS, I, as below named inventors, residing at the addresses stated next to our names, am a sole inventor (if only one name is listed below) or a joint inventor (if plural names are listed below) of certain new and useful improvements in

SIGNAL INPUT AND OUTPUT APPARATUS

for which application for Letters Patent of the United States of America was executed by me on the date indicated next to my name and address;

AND WHEREAS, Sony Corporation, a Japanese corporation with offices at 7-35 Kitashinagawa 6-Chome, Shinagawa-Ku, Tokyo, Japan (hereinafter referred to as ASSIGNEE) is desirous of acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all foreign countries;

NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto the said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue the said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto;

And I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designee, as ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further remuneration, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto;

And I further agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters patent which may be granted for my aforesaid invention, as the ASSIGNEE thereof shall hereafter require and prepare at its own expense;

And I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto;

And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.

And I hereby authorize and request my attorney(s) of record in this application to insert the serial number and filing date of this application in the spaces that follow: Serial Number: 09/604,632, Filing Date: 6/27/2000.

This assignment executed on the dates indicated below.

HIROKAZU NAGASAWA

Name of first or sole inventor Execution date of U.S. Patent Application
KANAGAWA, JAPAN

Residence of first or sole inventor

Hirokazu Nagasawa September 14, 2000
Signature of first or sole inventor Date of this assignment

YOSHITSUGU NOMIYAMA

Name of second inventor Execution date of U.S. Patent Application
TOKYO, JAPAN

Residence of second inventor

Yoshitsugu Nomiya October 3, 2000
Signature of second inventor Date of this assignment

MASAAKI KOJIMA

Name of third inventor Execution date of U.S. Patent Application
TOKYO, JAPAN

Residence of third inventor

Masaaki Kojima September 18, 2000
Signature of third inventor Date of this assignment

PATENT

RECORDED: 10/20/2000

REEL: 011194 FRAME: 0443