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MUD 11.19.99 To the Hon. Commissioner of Patents & Trademarks: Please record the attached original documents or copy thereof. 2. Name and address of receiving party(ies): 1. Name of conveying party(ies): Kazuhiro KIYOURA, Toshiyuki Name: SUZUKI, Takeshi MATSUMOTO, Hiroshi KITAGAWA, Takehiro PIONEER CORPORATION TAKADA and Kazunori SAITOH and Additional name(s) of conveying party(les) attached? If Yes [X] No TOHOKU PIONEER CORPORATION Street Address: Nature of conveyance: No. 4-1 Meguro 1-chome, Meguroku, Tokyo-to, Japan [X] Assignment [] Merger and1 | Security Agreement [ ] Change of Name 1105, Aza-Nikko, Oaza-Kunomoto, Tendo-shi, []Other Yamagata-ken, Japan Execution Dates: November 15, 1999 443/3 4. Application number(s) or patent (numbers): If this document is being filed together with a new application, the execution dates of the application is: November 15, 1999 A. Patent Application No(s). B. Patent No(s). Additional numbers attached? [ ] Yes [X] No 5. Name and address of party to whom corre-6. Total number of applications and patents spondence concerning document should involved: be mailed: 1 7. Total fee (37 CFR 3.41).....\$ 40 YOUNG & THOMPSON [X] Enclosed Second Floor Il Authorized to be charged to deposit 745 South 23rd Street account Arlington, VA 22202 8. Deposit Account No. 25-0120 (Attach duplicate copy of this page if paying by deposit ac-DO NOT USE THIS SPACE 9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Mary Shelton November 19, 1999

Signature

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## ASSIGNMENT

FOR ONE DOLLAR (\$1.00) and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I (We), Kazuhiro KIYOURA, Toshiyuki SUZUKI, Takeshi MATSUMOTO, Hiroshi KITAGAWA, Takehiro TAKADA and Kazunori SAITOH

being the inventor(s) of certain improvements in GAIN CONTROLLING APPARATUS AND METHOD, INFORMATION REPRODUCING APPARATUS AND METHOD, AND INFORMATION RECORDING APPARATUS AND METHOD

hereby assign unto

- (1) PIONEER CORPORATION
- (2) TOHOKU PIONEER CORPORATION

having a principal place of business at

- (1) No. 4-1 Meguro 1-chome, Meguro-ku, Tokyo-to, Japan
- (2) 1105, Aza-Nikko, Oaza-Kunomoto, Tendo-shi, Yamagata-ken, Japan

our entire right, title and interest in and to such invention, together with the patent rights and rights of protection to the same throughout the world, including any patent rights which may result from the application for United States Letters Patent in and to any and all divisions, reissues, continuations and extensions thereof and in and to any Letters Patent that may be granted thereon; said invention, application and Letters Patent that may be granted thereon; said invention, application and Letters Patent to be held and enjoyed by the said assignee for its own use and behoof and for the use and behoof of its successors and assigns, to the full end of the term from which said Letters patent or other rights of protection may be granted, as fully and as entirely as the same would have been held and enjoyed by us had this assignment and sale not been made.

WE COVENANT, AGREE AND WARRANT that we have a full and unencumbered title to the invention hereby assigned, and we further covenant and agree that we will, at any time upon request, without further compensation, execute and deliver any and all papers or instruments that in the opinion of the assignee may be necessary or desirable to secure said assignee the full enjoyment of the rights and properties herein conveyed or intended to be conveyed.

IN WITNESS WHEREOF, we have hereunto set out hand and seal this 15th day of November  $\,$  , 19 99 .

Date: November 15, 1999
Joskiyuki Suzuki
Date: November 15, 1999  Miroshi Xitaguwa
Date: November 15, 1999  Kirkuner, Saitch

PATENT
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