	05-23-20	i03		
PATENTS ONLY TO THE		E	Our File No.	9281-4545
Please record 1. Name of Party conveying an interest: Naoya Hasegawa Eiji Umetsu Additional name(s) of conveying party(ies) a	1024554 5/13/03 attached?	document or copy 2. Name and Add Name: A Internal Address: Street Address: City: State/Zip:	Iress of Party receiving a LPS Electric Co., Ltd. 1-7 Yukigaya, Otsu Ota-ku, Tokyo Japan and addresses attache	ika-cho d?
	☐ Yes 🔀 No Change of Name Merger	Other:	<u> </u>	As No
Execution Date: April 18, 2003 Application number(s) or patent number(s). Additional sheet attached? If this document is being filed together with a new application, the execution date of the application is: April 18, 2003 Date Patent Application No.(s) Patent No.(s)				
concerning document should be mailed: BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610 (312)321-4200		Number of application. Total fee (37 CF) Enclosed Authorized to No. 23-1925 Please charany overpay 1925.	to be charged to Deposi	it Account
DO NOT USE THIS SPACE 22/2003 DBYRNE 00000145 10437219 FC: 8021 40.00 DP				

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.

Gustavo Siller Jr. Reg No. 32,305 Name of Person Signing

Total number of pages including cover sheet, attachments, and document: 3

Signature

Rev. Oct-97

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PATENT REEL: 014088 FRAME: 0031

ASSIGNMENT

WHEREAS, Naoya Hasegawa and Eiji Umetsu

hereinafter called the "Assignors", have made the invention described in the United States patent application entitled MAGNETIC SENSING ELEMENT BIASED BY TWO ANTIFERROMAGNETIC LAYERS ABOVE FREE MAGNETIC LAYER AND TWO HARD BIAS LAYERS AT TWO SIDES OF THE FREE MAGNETIC LAYER, AND METHOD FOR MAKING THE SAME

executed by Assignors on the same date as this Assignment;

WHEREAS, ALPS ELECTRIC CO., LTD., a corporation organized and existing under the laws of Japan, having a place of business at 1-7 Yukigaya, Otsukacho, Ota-ku, Tokyo, Japan, hereinafter called the "Assignee", desires to acquire the entire right, title and interest in and to the invention and the patent application identified above, and all patents which may be obtained for said invention, as set forth below;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other valuable and legally sufficient consideration, the receipt of which by the Assignors from the Assignee is hereby acknowledged, the Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents therefor in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; to have and to hold for the sole and exclusive use and benefit of the Assignee, its successors and assigns, to the full end of the term or terms for all such patents.

The Assignors hereby covenant and agree, for both the Assignors and the Assignors' legal representatives, that the Assignors will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee like exclusive title in and to all such other patent applications and patents; and in the prosecution of any interference which may arise involving said invention, or any such patent application or patent; and that the Assignors will execute and deliver to the Assignee any and all additional papers which may be requested by the Assignee to carry out the terms of this Assignment.

PATENT REEL: 014088 FRAME: 0032 The Commissioner of Patents and Trademarks is hereby authorized and requested to issue patents to the Assignee in accordance with the terms of this Assignment.

IN TESTIMONY WHEREOF, the Assignors have executed this agreement.

DATE:	April 18, 2003	Ravya Hasegawa
		Inventor: Naoya Hasegawa
WITNES	SSED:	
DATE:	April 18, 2003	Nobuhiro Hayashi
DATE:	April 18, 2003	Atsushi Fakurushi
DATE:	April 18, 2003	Eyr Umetsu Inventor: Eiji Umetsu
WITNES	SED:	Inventor.
DATE:	April 18, 2003	Attuhir Hayashi
DATE:	April 18, 2003	Ataush Frahanashi
DATE:		
	40.77	Inventor:
WITNES	SSED:	
DATE:		· · · · · · · · · · · · · · · · · · ·
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RECORDED: 05/13/2003

PATENT REEL: 014088 FRAME: 0033