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PATENT REEL: 012443 FRAME: 0033

## ASSIGNMENT

	paid to each of the undersigned
	HIROTOSHI TAKAHASHI, KAZUO AKAIKE
Insert Name(s) of Inventor(s)	
	the undersigned hereby sell(s) and assign(s) to
Insert Name(s) of Assignee(s)	HITACHI KOKUSAI ELECTRIC INC.
Address	of 14-20, 3-CHOME, HIGASHI-NAKANO, NAKANO-KU, TOKYO, JAPAN
	(hereinafter designated as the Assignee) the entire right, title and interest for the United States as defined in 35 USC 100, in the invention known as
Ntle of Invention	MODULATOR AND DEMODULATOR
Date of Signing of Application	for which an application for patent in the United States has been executed by the undersigned on November 29, 200/

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division or reissue thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

The undersigned agree(s) to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any division or divisions or continuing or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

PATENT REEL: 012443 FRAME: 0034 The undersigned hereby grant(s) the firm of WENDEROTH, LIND & PONACK, L.L.P., 2033 K Street, N.W., Suite 800, Washington, DC 20006, the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date November 29, 200/, Name of Inventor Sirotoshi Takahashi Date November 19. 2001, Name of Inventor Kazuo Akaike Date \_\_\_\_\_, Name of Inventor \_\_\_\_\_ , Name of Inventor Date \_\_\_\_\_, Name of Inventor \_\_\_\_\_ Date \_\_\_\_\_, Name of Inventor \_\_\_\_\_ (This assignment should preferably be acknowledged before a United States Consul. If not, then the execution by the Inventor(s) should be witnessed by at least two witnesses who sign here.) kazuski Takahashi Manabu Nakamura **ACKNOWLEDGEMENT** This \_\_\_\_\_\_, 19\_\_\_\_\_, before me personally came the above-named to me personally known as the individual(s) who executed the foregoing assignment, who did acknowledge to me that he (they) executed the same of his (their) own free will for the purposes therein set forth. Official Signature SEAL Official Title The above application may be more particularly identified as follows: U.S. Application Serial No. \_\_\_\_\_\_\_Filing Date \_\_\_\_\_ Applicant Reference Number \_\_\_\_\_ Atty Docket No.\_\_\_\_\_ Title of Invention \_\_\_\_\_

RECORDED: 01/07/2002

PATENT REEL: 012443 FRAME: 0035