Form **PTO-1595** (Rev. 03-05) OMB No. 0651-0027 (exp. 6/30/2005) RE



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PATENTS ONLY			
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Shinji ISHIHARA (12/05/2005), Takanori SATOH (12/05/2005), Mitsuhiro INOUCHI (12/05/2005), Osamu KUBOTA (12/05/2005), and	Name: Furuno Electric Company Limited		
Additional name(s) of conveying party(ies) attached? X Yes No	Internal Address: Street Address:		
3. Nature of conveyance/Execution Date(s):	Succe Address.		
Execution Date(s): in parentheses after inventor name	9-52, Ashihara-cho		
X Assignment Merger Change of Name			
Security Agreement Joint Research Agreement	City: Nishinomiya-shi		
Government Interest Assignment	State: Hyogo-ken		
Executive Order 9424, Confirmatory License	Country: JAPAN Zip:		
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4. Application or patent number(s):	This document is being filed together with a new application.		
A. Patent Application No.(s)	B. Patent No.(s)		
NEW			
Additional numbers attach	ed? Yes X No		
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved:		
Name: Michael K. Mutter BIRCH, STEWART, KOLASCH & BIRCH	1,		
LLP	7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00		
Internal Address: Atty. Dkt.: 0757-0306PUS1	Authorized to be charged by credit card		
Street Address: 8110 Gatehouse Road	Authorized to be charged to deposit account		
Suite 100 East P.O. Box 747	X Enclosed		
	None required (government interest not affecting title)		
City: Falls Church	8. Payment Information		
State: VA Zip: 22040-0747			
Phone Number: (703) 205-8000	Expiration Date		
Fax Number: (793) 205-8050	b. Deposit Account Number		
Email Address:mallroom@bskb.com	Authorized User Name		
9. Signature:	D 10 0007		
Signature	December 19, 2005 Date		
Michael K. Mutter - 29,680	Total annulus of course ball of the course		
Name of Person Signing	sheet, attachments, and documents:		
H BOET ANADARD / ALBERTON			

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Form PTO-1595	RECORD	OATION FORM COVER SHEET (CONTINUED)	
Additional Conve	ying Party(ies)/Execu	ution Date(s) (1. Continued):	
Yuriko ONISHI (12/0	5/2005)		
Additional Assign	ees (2. Continued):		
Internal Address: Street Address:			
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Assignee Name:			
Internal Address:			
Street Address:			
City:	State:	Country:	Zip:
Assignee Name:			
Internal Address:			
Street Address:			
City:	State:	Country:	Zip:
Additional Applica	tions and/or Patents	(4. Continued):	
Additional Patent Application 4A. Continued:	on Numbers	Additional Patent Numbers 4B. Continued:	
	Additional numbers a	ttached? Yes No	

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Docket No.: 0757-0306PUS1

REEL: 017395 FRAME: 0835

BIRCH, STEWART, KOLASCH & BIRCH, LLP

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ASSIGNMENT

	Application No. NEW		Filed December 19, 2005
nsert Name(s) Inventor(s)	***(Given Name	FAMILY NAME (ALL CAPS))***	
	WHEREAS,	Shinji ISHIHARA	; Takanori SATOH
	Mitsuhiro INOUCHI	Osamu KUBOTA	. Yuriko ONISHI
		:	
		;··	÷
	(hereinafter designated as the under	signed) has (have) invented certain	: new and useful improvements in
sert Title S Invention	SONAR ————————————————————————————————————		
	for which an application for Letters undersigned (except in the case of a		erica has been executed by the
nsert Date f Signing of pplication	on	2005	; and
isert Name Assignee	WHEREAS, Furuno E	lectric Company Limite	d
isert Address I Assignee	9-52, Ashihara-cho, 1	Nishinomiya-shi, Hyogo-	ken, Japan
HECK BOX APPROPRIATE	its heirs, successors, legal represe desirous of acquiring the entire rig Letters Patent(s) that may be granted in any foreign countries.	ght, title and interest in and to said	d invention and in and to any
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	and to any and all divisions, reissu term or terms for which the same ma		extensions thereof for the full

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PATENT REEL: 017395 FRAME: 0836 The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional, conversion 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, conversion or reissue thereof or Letter Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agree(s) to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the 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 of America patent(s) or a grant of a valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorize(s) and request(s) the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patents resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) the 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.

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The undersigned hereby covenant(s) that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

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

Date 12/5/2005	Name of Inventor To B 3 22
Date 12/5/2005	(signature) Shinji ISHIHARA Name of Inventor (Signature) Takanari SATON
Date 12/5/2005	(signature) Takanori SATOH H 内 光 博 Name of Inventor
Date 12/5/2005	(signature) Mitsuhiro INOUCHI Name of Inventor 2保日修
Date 127 Name of Inv	(signature) Osamu KUBOTA
Date 12/5/2005	Name of Inventor
Date,	Name of Inventor
	(signature)

Page 2 of ___

RECORDED: 12/19/2005

June 2002