## AD 581-40 518 Rec'd PCT/PTO 10 AUG 2001

Director of the U.S. Patent and Trademark Office **Box Assignments** 

## 10-15-2001

U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

wa:	shing	101873	3318 Attorney Docket No. 109831						
	То	the Director of the U.S. Patent and Trademark Off	ice: Please record the attached original document or copy thereof.						
1.	A.	Namc of conveying parties: 1) Shigeo TSUZUKI 2) Kazuo TAKEMOTO 3) Naoki OHKOSHI 4) Yoshitaka MURASE 5) Hirotoshi EISHIMA 6) Jiro MAEDA 6) Jiro MAEDA	2. A. Name and address of receiving party: AISIN AW CO., LTD. 10, TAKANE, FUJII-CHO, ANJO-SHI AICHI-KEN, 444-1192, JAPAN						
	B.	Additional name(s) of conveying party(ies) attached Yes No	ed?						
3.	A.	Nature of conveyance:	B. Additional name(s) & address(es) attached? ☐ Yes ☒ No						
	$\boxtimes$	Assignment							
		Security Agreement	е						
		Other							
	B.	Execution Date: <u>1-3 &amp; 6) August 6, 2001; 4&amp; 5)</u> <u>August 7, 2001</u>							
4.	A. 6, 2 B.	If this document is being filed together with a new 001; 4 & 5) August 7, 2001  Patent Application No.(s)	w application, the execution date of the application is: 1-3 & 6) August  C. Patent No.(s)						
	Additional numbers attached? ☐ Yes ☒ No								
5.		ne and address of party to whom correspondence cerning document should be mailed:	6. Total number of applications and patents involved: 1						
	Na	me: James A. Oliff	7. A. Total fee (37 CFR 3.41)\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\						
1 <u>8</u> :	S.C.	Alight was to the last	B. Enclosed (Check No. <u>121725</u> )						
	Ad	ldress: OLIFF & BERRIDGE, PLC P.O. Box 19928 Alexandria, VA 22320	Credit any overpayment or charge any underpayment to deposit account number 15-0461.						
9.	To i	tement and signature. the best of my knowledge and helief, the foregoing original document.	formation is true and correct and any attached copy is a true copy of						
		nes A. Oliff Registration No. 27,975 ocrt A. Miller Registration No. 32,771	Date: August 10, 2001						
		Total number of p	ages including cover sheet, attachments, and document: 2						

**PATENT REEL: 012236 FRAME: 0489** 

## **ASSIGNMENT**

		(1) <u>St</u>	riggo TSUZUKI	(5)	HIROGSHI EISHIMA			
(1-8)	Inscrt	(2) K	IZUO TAKEMOTO	(6)	Jiro MAEDA			
	Name(s) of Inventor(s)	(3) N	noki OHKOSHI	(7)				
		(4) Yo						
		In c			and other good and valuable			
		to each of over to	to each of the undersigned, each undersigned agrees to assign, and hereby does assign, transfer and set					
(9)	Insert Name of							
(10)	Assignee Insert Address of		SIN AW CO., LTD.  Takane, Funi-cho, Anjo-sh	<u> </u>				
,	Assignce	(10) <u>A</u> 1	chi-ken, 444-1192, Japan					
		the entire of invention, divisional,	ight, title and interest for the and in all applications for pa continuation, substitute, and	: United States of itent including as I reissue applicat	uers, successors, assigns and le f America as defined in 35 U ny and all provisional, non-pi ion(s), and all Letters Patent, and on the invention known:	.\$.C §100, in the rovisional, extensions.		
(11)	Insert	(11) <u>U</u>	S. National Stage of PCT/JP	00/08787				
	Identification such as Title, Case	R	ANGE SWITCHING APPAR	ATUS				
	Number, or Foreign	(Attermes:	Docket No. 109831					
	Application Number	,		cocuted on applic	ation for patent in the United	d Statut of America		
			te herewith or	ceama an appin	MERRITO PALEIR III (IIC CITICA	a moca W. Michel		
(12)	Insert Date of	(12)	1-3 and 6 Auger	1+ 6 2001.	, 4 & 5 August 7, 2	2001		
	Signing of Application	(12) on	1 3 and 0 ragse	2001,	4 & J August 7, 2	2001		
(13)	Alternative	(13) U.S	application Serial Number					
		1.57						
107	Identification for		A					
	filed applications  1) Each undersigned agree	s to execute at		tion with any ap	plication and any continuing	, divisional or		
reissue application any application any application assistants claims creexaminers and therein a binding identificial application and the control of the con	filed applications  1) Each undersigned agree applications for the invention ions and patents as the Assigned agree ideation or continuation or dignee in every way possible it. 3) Each undersigned agree or provisions of the Internation 4) Each undersigned agree or provisions of the Internation 4. 5) Each undersigned agree in a grant of a valid Unit 5. 5) Each undersigned author digneration(s) to the said application(s) to the said application(s) to the said application(s) to the said application that the has not on him and his heirs, success 6) Each undersigned herebation that may be necessary ion of this document.	is to execute all, and any pate may deen so to execute all vision thereof no obtaining even to execute all sold Conventions to Deform all ted States pate rives and requires and requires, as A executed, and isons, assigns a sy grants the fir or desirable in	Il papers necessary in connecent(s) issuing thereon, and air necessary. Il papers necessary in connece, or any patent or reissue applicate and going forward will papers and documents and on for Protection of Industria Il affirmative acts which may estate to the Assignee, estate Director of Patents to ssignee of the entire interest, will not execute, any agreement legal representatives of Olippi & Berkhidge, Product to comply with the rule of the control of the rule of the comply with the rule of the same and the comply with the rule of the control of the comply with the rule of the control of the comply with the rule of the control of the comply with the rule of the control of the comply with the rule of the control of the comply with the rule of the control of	tion with any ap- so to execute sep- tion with any into lication based the th such interfere perform any act. Il Property or sim, be necessary to or issue any and a and covenants the tents in conflict l  12 the power to les of the United	plication and any continuing parate assignments in connect criference which may be declucted, for the invention, and mee, which may be necessary in chilar agreements.  The obtain, maintain or confirm all Letters Patents of the Unit hat he has full right to convenere with, and agrees that this insert on this assignment any States Patent and Trademark	divisional or tion with such ared concerning to cooperate with onnection with by reissue or ed States resulting the entire interest assignment is		
reissue applicat any app the Assi claims of reexami from sai herein a binding identifit recordat	filed applications  1) Each undersigned agree applications for the invention ions and patents as the Assigned agree ideation or continuation or dignee in every way possible it. 3) Each undersigned agree or provisions of the Internation 4) Each undersigned agree or provisions of the Internation 4. 5) Each undersigned agree in a grant of a valid Unit 5. 5) Each undersigned author digneration(s) to the said application(s) to the said application(s) to the said application(s) to the said application that the has not on him and his heirs, success 6) Each undersigned herebation that may be necessary ion of this document.	is to execute all, and any pate may deen so to execute all vision thereof no obtaining even to execute all sold Conventions to Deform all ted States pate rives and requires and requires, as A executed, and isons, assigns a sy grants the fir or desirable in	Il papers necessary in connecent(s) issuing thereon, and all necessary in connece, or any patent or reissue applicate and going forward will papers and documents and on for Protection of Industrial affirmative acts which may not to the Assignee, esta the Director of Patents to ssignee of the entire interest, will not execute, any agreement legal representatives and legal representatives are of Oliff & BERRIDGE, Product to comply with the rule dersigned on the date(s) optodersigned on the date(s)	tion with any ap- so to execute sep- tion with any into lication based the th such interfere perform any act. Il Property or sim, be necessary to or issue any and a and covenants the tents in conflict l  12 the power to les of the United	plication and any continuing parate assignments in connect orference which may be declicated, for the invention, and mee, which may be necessary in chilar agreements, obtain, maintain or confirm all Letters Patents of the Unit hat he has full right to convenere with, and agrees that this insert on this assignment any States Patent and Trademark right name(s).	divisional or tion with such ared concerning to cooperate with onnection with by reissue or ed States resulting y the entire interest assignment is y further to Office for		
reissue application any application Assistants claims creexami from suiterein a binding identific recordat	filed applications  1) Each undersigned agree applications for the invention ions and patents as the Assigned agree ideation or continuation or dignee in every way possible it. 3) Each undersigned agree or provisions of the Internation 4) Each undersigned agree or provisions of the Internation 4. 5) Each undersigned agree in a grant of a valid Unit 5. 5) Each undersigned author digneration(s) to the said application(s) to the said application(s) to the said application(s) to the said application that the has not on him and his heirs, success 6) Each undersigned herebation that may be necessary ion of this document.	is to execute all, and any pate may deen so to execute all vision thereof no obtaining even to execute all sold Conventions to Deform all ted States pate rives and requires and requires, as A executed, and isons, assigns a sy grants the fir or desirable in	Il papers necessary in connecent(s) issuing thereon, and air (s) issuing thereon are patterned and going forward will papers and documents and in for Protection of Industria III affirmative acts which may ent to the Assignee.  ests the Director of Patents it ssignee of the entire interest, will not execute, any agreement legal representatives in of Olippe & Berkhogk, Proder to comply with the rule dersigned on the date(s) operation.	tion with any ap- so to execute sep- tion with any into lication based the th such interfere perform any act. Il Property or sim, be necessary to or issue any and a and covenants the tents in conflict l  12 the power to les of the United	plication and any continuing parate assignments in connect criference which may be declucted, for the invention, and mee, which may be necessary in chilar agreements.  The obtain, maintain or confirm all Letters Patents of the Unit hat he has full right to convenere with, and agrees that this insert on this assignment any States Patent and Trademark	divisional or toon with such ared concerning to cooperate with connection with by reissue or ed States resulting y the entire interest assignment is a further to Office for (SFAL)		
reissue applicate any app the Assi claims of reexaming from sain a binding identific recordate. Date	filed applications  1) Each undersigned agree applications for the invention ions and patents as the Assigned agree ideation or continuation or dignee in every way possible it. 3) Each undersigned agree or provisions of the Internation 4) Each undersigned agree or provisions of the Internation 4. 5) Each undersigned agree in a grant of a valid Unit 5. 5) Each undersigned author digneration(s) to the said application(s) to the said application(s) to the said application(s) to the said application that the has not on him and his heirs, success 6) Each undersigned herebation that may be necessary ion of this document.	is to execute all, and any pate may deen so to execute all vision thereof no obtaining even to execute all sold Conventions to Deform all ted States pate rives and requires and requires, as A executed, and isons, assigns a sy grants the fir or desirable in	Il papers necessary in connecent(s) issuing libercon, and all necessary in connece, or any patent or reissue appidence and going forward will papers and documents and on for Protection of Industrial affirmative acts which may not to the Assignee, esta the Director of Patents to ssignee of the entire interest, will not execute, any agreement legal representatives and legal representatives and legal representatives are of Olippi & Berringer, Poorder to comply with the rule dersigned on the date(s) open forwenter Signature.	tion with any ap- so to execute sep- tion with any into lication based the th such interfere perform any act. Il Property or sim, be necessary to or issue any and a and covenants the tents in conflict l  12 the power to les of the United	plication and any continuing parate assignments in connect orference which may be declicated, for the invention, and mee, which may be necessary in chilar agreements, obtain, maintain or confirm all Letters Patents of the Unit hat he has full right to convenere with, and agrees that this insert on this assignment any States Patent and Trademark right name(s).	divisional or tion with such ared concerning to cooperate with onnection with by reissue or ed States resulting the entire interest assignment is further to Office for (SFAL)		
reissue applicate any applicate any applicate any applicate any applicate any applications of the Assistance and applications and applications are applicated as a second and applicated as a second as a second and applicated as a second and applicated as a second and applicated as a second and a second and applicated as a second as a second and applicated as a second and applicated as a second and applicated as a second as a second and a second and a second an	filed applications  1) Each undersigned agree applications for the invention ions and patents as the Assigned agree ideation or continuation or dignee in every way possible it. 3) Each undersigned agree or provisions of the Internation 4) Each undersigned agree or provisions of the Internation 4. 5) Each undersigned agree in a grant of a valid Unit 5. 5) Each undersigned author digneration(s) to the said application(s) to the said application(s) to the said application(s) to the said application that the has not on him and his heirs, success 6) Each undersigned herebation that may be necessary ion of this document.	is to execute all, and any pate may deen so to execute all vision thereof no obtaining even to execute all sold Conventions to Deform all ted States pate rives and requires and requires, as A executed, and isons, assigns a sy grants the fir or desirable in	Il papers necessary in connecent(s) issuing thereon, and air necessary. Il papers necessary in connece, or any patent or reissue appidence and going forward will papers and documents and in for Protection of Industria Il affirmative acts which may ent to the Assignee, ests the Director of Patents is ssignee of the entire interest, will not execute, any agreement legal representatives and legal representatives of order to comply with the rule dersigned on the date(s) opiding the patentor Signature.  [Inventor Signature]	tion with any ap- so to execute sep- sion with any intolication based the ith such interfere perform any act if Property or sim be necessary to in issue any and if and covenants the ents in conflict for the power to less of the United posite the under	plication and any continuing parate assignments in connect creference which may be declicreon, for the invention, and once, which may be necessary in chilar agreements, obtain, maintain or confirm all Letters Patents of the Unit hat he has full right to convenere with, and agrees that this insert on this assignment any States Patent and Trademark righted name(s).	divisional or toon with such ared concerning to cooperate with connection with by reissue or ed States resulting y the entire interest assignment is a further k Office for (SFAL) (SFAL) (SFAL)		
reissue applicate any app the Assi claims of reexaming therein a binding identific recordate. Date Date Date Date	filed applications  1) Each undersigned agree applications for the invention ions and patents as the Assigned agree fication or continuation or dignee in every way possible in 3) Each undersigned agree or provisions of the Internation 4) Each undersigned agree on a grant of a valid Unit 5) Each undersigned author a grant of a valid Unit 5) Each undersigned author a grant of a valid Unit 5) Each undersigned author a grant of a valid Unit 5) Each undersigned author a grant of the said Assigned, and that he has not on him and his heirs, success 6) Each undersigned herebation that may be necessary ion of this document.  In witness whereof, executing the first file of the August 6, 2004  August 6, 2004	is to execute all, and any pate may deen so to execute all vision thereof no obtaining even to execute all sold Conventions to Deform all ted States pate rives and requires and requires, as A executed, and isons, assigns a sy grants the fir or desirable in	Il papers necessary in connecent(s) issuing libercon, and al necessary in connece or contessary in connece or any patent or reissue applicate and going forward will papers and documents and on for Protection of Industrial affirmative acts which may not to the Assignee. The estate Director of Patents it is signee of the entire interest, will not execute, any agreement legal representatives and legal representatives and legal representatives are of Oliff & Berkhoge, Product to comply with the rulatersigned on the date(s) open forwards Signature.  Inventor Signature  Inventor Signature  Inventor Signature	tion with any ap- so to execute sep- sion with any intolication based the such interfere perform any act.  If Property or sim, be necessary to a issue any and and covenants the tents in conflict learns of the United posite the under the soft the under the under the soft the under the under the soft the under the soft the under the soft the under the under the soft the under the soft the under the	plication and any continuing parate assignments in connect orference which may be declicated, for the invention, and ince.  In the invention of the invention, and ince.  In the invention of the Unit hat he has full right to convene the continuity and agrees that this insert on this assignment any States Patent and Trademark right and ame(s).	divisional or tion with such ared concerning to cooperate with onnection with by reissue or ed States resulting the entire interest assignment is a further to Office for (SFAL) (SFAL) (SFAL) (SFAL)		
reissue applicate any applicate any applicate any applicate any applicate any applications of the Assistance of the Assistance and applicate a	filed applications  1) Each undersigned agree applications for the invention ions and patents as the Assigned agree iteration or continuation or dignee in every way possible it.  3) Each undersigned agree or provisions of the Internation 4) Each undersigned agree or provisions of the Internation 5) Each undersigned agree or agree and it was a signed, and that he has not on him and his heirs, success 6) Each undersigned herebation that may be necessary ion of this document.  In witness whereof, executing the first success of the document	is to execute all, and any pate may deen so to execute all vision thereof no obtaining even to execute all sold Conventions to Deform all ted States pate rives and requires and requires, as A executed, and isons, assigns a sy grants the fir or desirable in	Il papers necessary in connecent(s) issuing thereon, and ain necessary Il papers necessary in connece, or any patent or reissue applicance and going forward will papers and documents and on for Protection of Industrial affirmative acts which may ent to the Assignee, ests the Director of Patents is ssignee of the entire interest, will not execute, any agreement legal representatives of Other & Berkhinger, Product to comply with the rule dersigned on the date(s) oping fiventor Signature  [Inventor Signature	tion with any ap- so to execute sep- sion with any intolication based the ith such interfere perform any act if Property or sim be necessary to in issue any and if and covenants the ents in conflict for the power to less of the United  posite the under  posite the	plication and any continuing parate assignments in connect erference which may be declareon, for the invention, and mee. which may be necessary in chilar agreements. obtain, maintain or confirm all Letters Patents of the Unit hat he has full right to convenere with, and agrees that this insert on this assignment any States Patent and Trademark right of the Control	divisional or toon with such ared concerning to cooperate with connection with by reissue or ed States resulting y the entire interest assignment is assignment of the collice for the collice		
reissue applicate any applicate any applicate any applicate any applicate any applications of the Assistance of the Assistance and the Assistance	filed applications  1) Each undersigned agree applications for the invention ions and patents as the Assigned agree fication or continuation or dignee in every way possible in 3) Each undersigned agree or provisions of the Internation 4) Each undersigned agree on a grant of a valid Unit 5) Each undersigned author a grant of a valid Unit 5) Each undersigned author a grant of a valid Unit 5) Each undersigned author a grant of a valid Unit 5) Each undersigned author a grant of the said Assigned, and that he has not on him and his heirs, success 6) Each undersigned herebation that may be necessary ion of this document.  In witness whereof, executing the first file of the August 6, 2004  August 6, 2004	is to execute all, and any pate may deen so to execute all wision thereof no obtaining even to execute all sold Conventions to Deform all ted States pate rives and requires and requires, as A executed, and isons, assigns a sy grants the fir or desirable in	Il papers necessary in connecent(s) issuing thereon, and air necessary Il papers necessary in connece or any patent or reissue appliedence and going forward will papers and documents and in or Protection of Industria II affirmative acts which may not to the Assignee.  ests the Director of Patents to ssignee of the entire interest, will not execute, any agreem and legal representatives most OLIFT & BERRIDGE, Proder to comply with the rule dersigned on the date(s) oping the patent of Signature and Inventor Signature.  Inventor Signature	tion with any ap- so to execute sep- sixm with any intolication based the such interfere perform any act in Property or simple necessary to a issue any and and covenants the sents in conflict lear the Duited posite the under the Conflict lear the United learning the United le	plication and any continuing parate assignments in connect criference which may be declicated, for the invention, and ince.  The property of the invention, and ince.  The property of the unitation of confirm and Letters Patents of the Unitation has full right to convener with, and agrees that this insert on this assignment any States Patent and Trademark right among the patent and Trademark	divisional or toon with such ared concerning to cooperate with onnection with by reissue or ed States resulting y the entire interest assignment is y further to Office for (SFAL)  (SFAL)  (SEAL)  (SEAL)  (SEAL)		
reissue applicate any applicate any applicate any applicate any applicate any applications of the Assistance of the Assistance and applicate a	filed applications  1) Each undersigned agree applications for the invention ions and patents as the Assigned agree iteration or continuation or dignee in every way possible it.  3) Each undersigned agree or provisions of the Internation 4) Each undersigned agree or provisions of the Internation 5) Each undersigned agree or agree and it was a signed, and that he has not on him and his heirs, success 6) Each undersigned herebation that may be necessary ion of this document.  In witness whereof, executing the first success of the document	is to execute all, and any pate may deen so to execute all wision thereof no obtaining even to execute all sold Conventions to Deform all ted States pate rives and requires and requires, as A executed, and isons, assigns a sy grants the fir or desirable in	Il papers necessary in connecent(s) issuing thereon, and ain necessary Il papers necessary in connece, or any patent or reissue applicance and going forward will papers and documents and on for Protection of Industrial affirmative acts which may ent to the Assignee, ests the Director of Patents is ssignee of the entire interest, will not execute, any agreement legal representatives of Other & Berkhinger, Product to comply with the rule dersigned on the date(s) oping fiventor Signature  [Inventor Signature	tion with any ap- so to execute sep- sixm with any intolication based the such interfere perform any act in Property or simple necessary to a issue any and and covenants the sents in conflict lear the Duited posite the under the Conflict lear the United learning the United le	plication and any continuing parate assignments in connect erference which may be declareon, for the invention, and mee. which may be necessary in chilar agreements. obtain, maintain or confirm all Letters Patents of the Unit hat he has full right to convenere with, and agrees that this insert on this assignment any States Patent and Trademark right of the Control	divisional or toon with such ared concerning to cooperate with onnection with by reissue or ed States resulting y the entire interest assignment is y further to Office for (SFAL) (SFAL) (SEAL) (SEAL) (SEAL) (SEAL)		

PATENT **REEL: 012236 FRAME: 0490**