FORM PTO-1595 1-31-92 S&H 9/92		PATENTS ONLY				
To th	e Honorab	Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.				
١.	Name	f conveying parties:				
	(1) (2)	Mitsuyuki TANIGUCHIH Tadashi INOUE nd address of receiving party: FANUC LTD. 100835609				
2.	Name	nd address of receiving party:				
		FANUC LTD. 3580, Shibokusa Aza-komanba, Oshino-mura Minamitsuru-gun, Yamanashi, 401-0597 Japan				
3.	Natur	of conveyance: X Assignment				
	Execu	on Date(s): July 2, 1998				
1.	(a) (b)	tion number(s) or patent number(s): 09/6/300 cument is being filed together with a new application: The execution date(s) of the application is/are: July 2, 1998 The title is: INTERPOLATION CIRCUIT FOR AN ENCODER *** OR *** cument is being filed after filing of the application: Patent Application No(s), filed; or Patent No(s), issued				
5.	Name	nd address of party to whom correspondence concerning document should be mailed: STAAS & HALSEY Our Docket: 392.1565/JDH 700 Eleventh Street, N.W. Suite 500 Washington, D.C. 20001				
3.	Total	umber of applications and patents involved:1_				
7.	Total	e (37 CFR 3.41) \$ 40.00 X Enclosed Authorized to be charged to deposit account.				
В.		Account No.: 19-3935 (Any underpayment is authorized to be charged to this Deposit Account) duplicate copy of this page if paying by deposit account)				
9.	To the	ent and signature. best of my knowledge and belief, the foregoing information is true and correct and any attached a true copy of the original document.				
		ey, Jr., Reg. No. 22,729 July 8, 1998				
N	lame of	erson Signing Signature Date Total number of pages comprising cover sheet: 2				

DO NOT USE THIS SPACE

U.S. ASSIGNMENT

5&H 7/94

F.	ANUC	LTD.	
3500, Shibokusa)shino-mura.
Minamitsuru-gun		 	
Fillam Usuru-gu.	1, 1a	manashii, 40	
(hereinafter, "ASSIGNEE"), the receipt of which and transfers to ASSIGNEE the entire and exclusion.			
(Title of Invention)			
INTERPOLATION	CIRC	UIT FOR AN E	ENCODER
	- 0.7	VI.100	
relating to International Patent Application PCT/JI States was executed on even date herewith or,			ich application for Letters Patent of the United
(a) executed on	;	(Insert date of execut	tion of application, if not concurrent)
(b) filed on	[Any registered extens	and of STAAS & MALSEY 700 Florent
Serial No/;		Street, N.W., Washin	ney of STAAS & HALSEY, 700 Eleventh ngton, D.C. 20001 (202/434-1500) is
	l	hereby authorized to known.	insert in (b) the specified data, when
			aid application and any continuation, division a full term or terms for which the said Letters
renewal, substitute, reissue or reexamination app Patent(s) may be granted and including any ex Patent(s)"). The ASSIGNOR agree(s), when requested by to do all acts which the ASSIGNEE may deem protection for said invention, including in the prep	plication stensions said ASS necessar	based thereon, for the thereof (collectively, GGNEE and without ch y, desirable or expedi nd prosecution of said	e full term or terms for which the said Letters hereinafter, "said application(s) and Letters arge to but at the expense of said ASSIGNEE ent, for securing, maintaining and enforcing application(s) and the issuance of said Letters
renewal, substitute, reissue or reexamination app Patent(s) may be granted and including any ex Patent(s)"). The ASSIGNOR agree(s), when requested by to do all acts which the ASSIGNEE may deem protection for said invention, including in the prep Patent(s), in any interference, reissue, reexamina which may arise or be declared in relation to san separate assignments and declarations, taking a	plication stensions said ASS necessar paration a pation, or pare, such	based thereon, for the thereof (collectively, GGNEE and without chy, desirable or expeding prosecution of said bublic use proceeding, acts to include but no	e full term or terms for which the said Letters hereinafter, "said application(s) and Letters arge to but at the expense of said ASSIGNEE ent, for securing, maintaining and enforcing application(s) and the issuance of said Letters and in any litigation or other legal proceeding to be limited to executing all papers, including
renewal, substitute, reissue or reexamination app Patent(s) may be granted and including any ex Patent(s)"). The ASSIGNOR agree(s), when requested by to do all acts which the ASSIGNEE may deem protection for said invention, including in the prep Patent(s), in any interference, reissue, reexamina which may arise or be declared in relation to san separate assignments and declarations, taking a	plication stensions said ASS necessar paration a ation, or p ne, such all rightfu	based thereon, for the thereof (collectively, GGNEE and without chry, desirable or expeding prosecution of said bublic use proceeding, acts to include but noul oaths, providing sw	e full term or terms for which the said Letters hereinafter, "said application(s) and Letters arge to but at the expense of said ASSIGNEE ent, for securing, maintaining and enforcing application(s) and the issuance of said Letters and in any litigation or other legal proceeding to be limited to executing all papers, including orn testimony, and obtaining and producing
renewal, substitute, reissue or reexamination app Patent(s) may be granted and including any ex Patent(s)"). The ASSIGNOR agree(s), when requested by to do all acts which the ASSIGNEE may deem protection for said invention, including in the prep Patent(s), in any interference, reissue, reexamina which may arise or be declared in relation to san separate assignments and declarations, taking a evidence.	plication stensions said ASS necessar paration a ation, or p ne, such all rightfu	based thereon, for the thereof (collectively, GGNEE and without chry, desirable or expeding prosecution of said bublic use proceeding, acts to include but noul oaths, providing sw	e full term or terms for which the said Letters hereinafter, "said application(s) and Letters arge to but at the expense of said ASSIGNEE ent, for securing, maintaining and enforcing application(s) and the issuance of said Letters and in any litigation or other legal proceeding to be limited to executing all papers, including forn testimony, and obtaining and producing ther/their signature(s).
renewal, substitute, reissue or reexamination appretent(s) may be granted and including any expatent(s)"). The ASSIGNOR agree(s), when requested by to do all acts which the ASSIGNEE may deem protection for said invention, including in the prep Patent(s), in any interference, reissue, reexamina which may arise or be declared in relation to san separate assignments and declarations, taking a evidence. IN WITNESS WHEREOF, the undersigned invention (Typed Name & Signature of Inventor(s))	plication stensions said ASS necessar paration a prion, or p ne, such all rightfu	based thereon, for the thereof (collectively, GGNEE and without chry, desirable or expeding prosecution of said bublic use proceeding, acts to include but not all oaths, providing swith the same of the said of the same of	e full term or terms for which the said Letters hereinafter, "said application(s) and Letters arge to but at the expense of said ASSIGNEE ent, for securing, maintaining and enforcing application(s) and the issuance of said Letters and in any litigation or other legal proceeding to be limited to executing all papers, including orn testimony, and obtaining and producing her/their signature(s).
renewal, substitute, reissue or reexamination appretent(s) may be granted and including any expatent(s)"). The ASSIGNOR agree(s), when requested by to do all acts which the ASSIGNEE may deem protection for said invention, including in the prep Patent(s), in any interference, reissue, reexamina which may arise or be declared in relation to san separate assignments and declarations, taking a evidence. IN WITNESS WHEREOF, the undersigned invention of the same and the same and the same are same as a separate assignments.	plication stensions said ASS necessar paration a prion, or p ne, such all rightfu	based thereon, for the thereof (collectively, GGNEE and without chry, desirable or expeding prosecution of said bublic use proceeding, acts to include but not all oaths, providing swith the same of the said of the same of	e full term or terms for which the said Letters hereinafter, "said application(s) and Letters arge to but at the expense of said ASSIGNEE ent, for securing, maintaining and enforcing application(s) and the issuance of said Letters and in any litigation or other legal proceeding to be limited to executing all papers, including orn testimony, and obtaining and producing ther/their signature(s). (Typed Name & Signature of Witness(es))
renewal, substitute, reissue or reexamination appletent(s) may be granted and including any ex Patent(s)"). The ASSIGNOR agree(s), when requested by to do all acts which the ASSIGNEE may deem protection for said invention, including in the prep Patent(s), in any interference, reissue, reexamina which may arise or be declared in relation to san separate assignments and declarations, taking a evidence. IN WITNESS WHEREOF, the undersigned inventored Name & Signature of Inventor(s)) 1) Mitsuyuki Taniguda	plication tensions said ASS necessar ation a stion, or place, such all rightful tentor(s)	based thereon, for the thereof (collectively, GGNEE and without chry, desirable or expeding prosecution of said bublic use proceeding, acts to include but not all oaths, providing swith the same of the said of the same of	e full term or terms for which the said Letters hereinafter, "said application(s) and Letters arge to but at the expense of said ASSIGNEE ent, for securing, maintaining and enforcing application(s) and the issuance of said Letters and in any litigation or other legal proceeding to be limited to executing all papers, including orn testimony, and obtaining and producing ther/their signature(s). (Typed Name & Signature of Witness(es))
renewal, substitute, reissue or reexamination appletent(s) may be granted and including any ex Patent(s)"). The ASSIGNOR agree(s), when requested by to do all acts which the ASSIGNEE may deem protection for said invention, including in the prep Patent(s), in any interference, reissue, reexamina which may arise or be declared in relation to san separate assignments and declarations, taking a evidence. IN WITNESS WHEREOF, the undersigned inventored Name & Signature of Inventor(s)) 1) Mitsuyuki Taniguda	plication tensions said ASS necessar ation a stion, or place, such all rightful tentor(s)	based thereon, for the thereof (collectively, GGNEE and without chry, desirable or expeding prosecution of said bublic use proceeding, acts to include but not all oaths, providing swith the same of the said of the same of	e full term or terms for which the said Letters hereinafter, "said application(s) and Letters arge to but at the expense of said ASSIGNEE ent, for securing, maintaining and enforcing application(s) and the issuance of said Letters and in any litigation or other legal proceeding to be limited to executing all papers, including orn testimony, and obtaining and producing her/their signature(s).
renewal, substitute, reissue or reexamination appletent(s) may be granted and including any ex Patent(s)"). The ASSIGNOR agree(s), when requested by to do all acts which the ASSIGNEE may deem protection for said invention, including in the prep Patent(s), in any interference, reissue, reexamina which may arise or be declared in relation to san separate assignments and declarations, taking a evidence. IN WITNESS WHEREOF, the undersigned invention (Typed Name & Signature of Inventor(s)) 1) Mitsuyuki Tanigudu Mitsuyuki Tanigudu Tadashi Inoue Tadashi Inoue	plication tensions said ASS necessar aration a ation, or place, such all rightful tentor(s)	based thereon, for the thereof (collectively, display and without chay, desirable or expedient prosecution of said bublic use proceeding, acts to include but noul oaths, providing swith as (have) affixed his/(Date) 1 y 2, 1998	e full term or terms for which the said Letters hereinafter, "said application(s) and Letters arge to but at the expense of said ASSIGNEE ent, for securing, maintaining and enforcing application(s) and the issuance of said Letters and in any litigation or other legal proceeding to be limited to executing all papers, including forn testimony, and obtaining and producing ther/their signature(s).
renewal, substitute, reissue or reexamination appletent(s) may be granted and including any ex Patent(s)"). The ASSIGNOR agree(s), when requested by to do all acts which the ASSIGNEE may deem protection for said invention, including in the prep Patent(s), in any interference, reissue, reexamina which may arise or be declared in relation to san separate assignments and declarations, taking a evidence. IN WITNESS WHEREOF, the undersigned invention (Typed Name & Signature of Inventor(s)) 1) Mitsuyuki Tanigudu Mitsuyuki Tanigudu Tadashi Inoue Tadashi Inoue	plication tensions said ASS necessar aration a ation, or place, such all rightful tentor(s)	based thereon, for the thereof (collectively, display and without chay, desirable or expedient prosecution of said bublic use proceeding, acts to include but noul oaths, providing swith as (have) affixed his/(Date) 1 y 2, 1998	e full term or terms for which the said Letters hereinafter, "said application(s) and Letters arge to but at the expense of said ASSIGNEE ent, for securing, maintaining and enforcing application(s) and the issuance of said Letters and in any litigation or other legal proceeding to be limited to executing all papers, including orn testimony, and obtaining and producing ther/their signature(s). (Typed Name & Signature of Witness(es))
renewal, substitute, reissue or reexamination appletent(s) may be granted and including any ex Patent(s)"). The ASSIGNOR agree(s), when requested by to do all acts which the ASSIGNEE may deem protection for said invention, including in the prep Patent(s), in any interference, reissue, reexamina which may arise or be declared in relation to sam separate assignments and declarations, taking a evidence. IN WITNESS WHEREOF, the undersigned inventor(s)) (Typed Name & Signature of Inventor(s)) Mitsuyuki TANIGUCHI Tadashi INOUE	plication tensions said ASS necessar paration a prion, or presented in the such all rightful rentor(s)	based thereon, for the thereof (collectively, desirable or expeding prosecution of said bublic use proceeding, acts to include but noul oaths, providing swith as (have) affixed his/(Date) 1y 2, 1998	e full term or terms for which the said Letters hereinafter, "said application(s) and Letters arge to but at the expense of said ASSIGNEE ent, for securing, maintaining and enforcing application(s) and the issuance of said Letters and in any litigation or other legal proceeding to be limited to executing all papers, including orn testimony, and obtaining and producing ther/their signature(s). (Typed Name & Signature of Witness(es))
renewal, substitute, reissue or reexamination appletent(s) may be granted and including any ex Patent(s)"). The ASSIGNOR agree(s), when requested by to do all acts which the ASSIGNEE may deem protection for said invention, including in the prep Patent(s), in any interference, reissue, reexamina which may arise or be declared in relation to san separate assignments and declarations, taking a evidence. IN WITNESS WHEREOF, the undersigned invention of the inventor of the inv	plication tensions said ASS necessar paration a prion, or presented in the such all rightful rentor(s)	based thereon, for the thereof (collectively, desirable or expeding prosecution of said bublic use proceeding, acts to include but noul oaths, providing swith as (have) affixed his/(Date) 1y 2, 1998	e full term or terms for which the said Letters hereinafter, "said application(s) and Letters arge to but at the expense of said ASSIGNEE ent, for securing, maintaining and enforcing application(s) and the issuance of said Letters and in any litigation or other legal proceeding to be limited to executing all papers, including orn testimony, and obtaining and producing her/their signature(s).
renewal, substitute, reissue or reexamination appletent(s) may be granted and including any ex Patent(s)"). The ASSIGNOR agree(s), when requested by to do all acts which the ASSIGNEE may deem protection for said invention, including in the prep Patent(s), in any interference, reissue, reexamina which may arise or be declared in relation to sam separate assignments and declarations, taking a evidence. IN WITNESS WHEREOF, the undersigned inventor(s)) (Typed Name & Signature of Inventor(s)) Mitsuyuki TANIGUCHI Tadashi INOUE	plication tensions said ASS necessar paration a prion, or presented in the such all rightful rentor(s)	based thereon, for the thereof (collectively, desirable or expeding prosecution of said bublic use proceeding, acts to include but noul oaths, providing swith as (have) affixed his/(Date) 1y 2, 1998	e full term or terms for which the said Letters hereinafter, "said application(s) and Letters arge to but at the expense of said ASSIGNEE ent, for securing, maintaining and enforcing application(s) and the issuance of said Letters and in any litigation or other legal proceeding to be limited to executing all papers, including orn testimony, and obtaining and producing her/their signature(s).
renewal, substitute, reissue or reexamination appletent(s) may be granted and including any ex Patent(s)"). The ASSIGNOR agree(s), when requested by to do all acts which the ASSIGNEE may deem protection for said invention, including in the prep Patent(s), in any interference, reissue, reexamina which may arise or be declared in relation to san separate assignments and declarations, taking a evidence. IN WITNESS WHEREOF, the undersigned inventored Name & Signature of Inventor(s)) 1) Mitsuyuki Tanigudu Mitsuyuki Tanigudu Tadashi Inoue Tadashi Inoue 3)	plication tensions said ASS necessar paration a stion, or pare, such all rightful rentor(s)	based thereon, for the thereof (collectively, display and without chirty, desirable or expedient prosecution of said public use proceeding, acts to include but now all oaths, providing swith as (have) affixed his/(Date) 1 y 2, 1998 1 y 2, 1998	e full term or terms for which the said Letters hereinafter, "said application(s) and Letters arge to but at the expense of said ASSIGNEE ent, for securing, maintaining and enforcing application(s) and the issuance of said Letters and in any litigation or other legal proceeding to be limited to executing all papers, including orn testimony, and obtaining and producing her/their signature(s).
renewal, substitute, reissue or reexamination appletent(s) may be granted and including any ex Patent(s)"). The ASSIGNOR agree(s), when requested by to do all acts which the ASSIGNEE may deem protection for said invention, including in the prep Patent(s), in any interference, reissue, reexamina which may arise or be declared in relation to san separate assignments and declarations, taking a evidence. IN WITNESS WHEREOF, the undersigned inventor (Typed Name & Signature of Inventor(s)) 1) Mitshydar Tangucht Mitshydar Tanigucht Tadashi Inoue Tadashi Inoue 3)	plication tensions said ASS necessar paration a stion, or pare, such all rightful rentor(s)	based thereon, for the thereof (collectively, display and without chirty, desirable or expedient prosecution of said public use proceeding, acts to include but now all oaths, providing swith as (have) affixed his/(Date) 1 y 2, 1998 1 y 2, 1998	e full term or terms for which the said Letters hereinafter, "said application(s) and Letters arge to but at the expense of said ASSIGNEE ent, for securing, maintaining and enforcing application(s) and the issuance of said Letters and in any litigation or other legal proceeding to be limited to executing all papers, including orn testimony, and obtaining and producing ther/their signature(s). (Typed Name & Signature of Witness(es))

PATENT REEL: 9456 FRAME: 0525