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(2) Inventor: Niezgoda, Thomas Anthony 301 River DeKalb Illinois 60115(US)

(2) Inventor: Oppenheimer, Carl Paul 161 Elm Street Amesbury Massachusetts 01913(US)

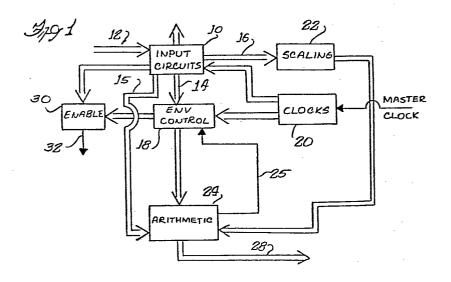
(74) Representative: Prutton, Roger
MARKS & CLERK Alpha Tower A.T.V.Centre
Birmingham B1 1TT(GB)

(54) Tone generation system for electronic musical instrument.

(57) A tone generation system is intended for use with an electronic musical instrument of the type wherein an audible tone is generated electronically in response to actuation of the instrument by a player. The invention generates digital signals capable of defining either the waveshape or the envelope characteristic of a tone for each tone initiated by such player actuation, the amplitude thereof being varied in accordance with the intensity of the player actuation initiating that tone. To define the amplitude, digital electronic circuits (22) are utilized for developing a digital scaling signal corresponding to the intensity of actuation of the instrument by the player. Other digital circuits develop (10, 18) a digital waveform segment signals which define portions of a composite waveform, as represented in an orthogonal coordinate system. Further digital circuits (24) arithmetically manipulate these scaling signals and waveform segment signals to give a composite output signal defining the envelope or waveform to be pro-

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## **EUROPEAN SEARCH REPORT**

Application number EP 80 30 2253

	DOCUMENTS CONSIDERED TO BE RELEVANT	CLASSIFICATION OF THE APPLICATION (Int. Cl.3)	
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
	<pre>US - A - 4 133 241 (K. NIIMI et al * Column 3, lines 6-64; column 4, lines 1-66; column 5, lines 14-51; figures 2,5,6 *</pre>	8-10	G 10 H 1/057 7/00
	DE - A - 2 712 226 (THE WURLITZER CO.)	1,2,5,	
	* Page 11, lines 6-33; page 12, lines 1-27; page 14, lines 13-23; page 17, lines 19-34; page 18, lines 1-22; figures 1.2 *		
			TECHNICAL FIELDS SEARCHED (Int. CI.9)
	<u>US - A - 3 952 623</u> (R. DEUTSCH)  * Column 4, lines 25-66; column 5, lines 22-44; figures 1,2 *	1,2,4, 5,7	G 10 H 1/057 7/00 1/055
	US - A - 3 809 786 (R. DEUTSCH)  * Column 4, lines 17-49; column 8, lines 57-67; column 9, lines 1-8, 28-55; figures 4, 5 *	1-7	
	and any two too		
			CATEGORY OF CITED DOCUMENTS
			X: particularly relevant A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: conflicting application D: document cited in the application L: citation for other reasons
	The present search report has been drawn up for all claims		&: member of the same patent family, corresponding document
Place of se	Date of completion of the search The Hague 10-12-198	Examiner 0	PULLUARD