

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte JOEL B. WACKNOV  
and WALLY E. RIPPEL

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Appeal No. 1998-0398  
Application No. 08/284,160

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ON BRIEF

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Before HAIRSTON, FLEMING, and LEVY, Administrative Patent Judges.

HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1, 2, 11, 13 and 14.

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The disclosed invention relates to a power inverter apparatus for driving either a three-wire, three-phase ac motor or a three-wire, single-phase ac motor. A controller of the power inverter controls the switching of switches in the power inverter according to a sequence that provides high-speed pulse-width modulation to drive either of the two ac motors.

Claim 1 is the only independent claim on appeal, and it reads as follows:

1. Power inverter apparatus for driving either a three-wire, three-phase ac motor or a three-wire, single-phase ac motor, comprising:

an input terminal for receiving a predetermined dc voltage relative to a reference;

first, second and third pairs of electrical switches, each pair including first and second series-connected switches connected between the input terminal and the reference, with the nodes between the first and second switches of the switch pairs forming first, second and third output terminals;

wherein the first, second and third output terminals are connectable to the input terminals of either a three-phase ac motor, having three input terminals and three windings, or a single-phase ac motor, having three input terminals and two windings; and

a controller for controllably switching ON and OFF the switches of the first, second and third pairs of switches according to a sequence that provides high-speed pulse-width modulation, such that the apparatus is conditioned to drive either the three-phase motor or the single-phase motor.



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49 is controlled by the microprocessor, and that the microprocessor is not shown (Final rejection, page 3).

Appellants argue (Reply Brief, page 3) that:

In the Appeal Brief, on page 9, Appellants state that "the switch 49 is either directly controlled by the microprocessor, in response to the simple input signal, or is controlled by the input signal itself." Appellants have not asserted that the switch 49 is controlled by the microprocessor because it is not necessary for it to be controlled by the microprocessor. More importantly, Appellants again assert that the mechanism for controlling the switches is not relevant to the invention. The switch could, for example, be manually toggled switches that are set by the technician attaching the power inverter apparatus to the motor. Alternatively, the switch could be driven by the microprocessor in response to any of a huge array of potential mechanisms for sensing the motor type. The control of a switch is well within the competence of a person skilled in the art, and the selection of the control mechanism is a simple design choice. Thus, the application enables a person skilled in the art to practice the invention, as is required under section 112.

We agree with appellants' arguments. The claims on appeal are all directed to a controller, and not to a microprocessor, that connects the power inverter to either of the two different types of motors. We likewise agree with the appellants that the switch control could be implemented in a variety of ways because it is within the competency of the

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skilled artisan. Accordingly, the lack of enablement rejection is reversed.

In the obviousness rejection, the examiner and the appellants agree that the inverter disclosed by Ernest controls either a three-phase motor (Figure 5) or a two-phase motor (Figure 7) (Final rejection, page 6; Brief, page 10). The examiner took Official Notice (Final rejection, page 6) that "to run a single phase motor with two windings, a run and a start, is well known in the art." In the absence of a challenge by the appellants, we will accept the examiner's statement as true that "[o]ne of ordinary skill in the art at the time of Ernest would have known to substitute this single phase motor for that shown in figure 7 depending on the availability of motors and the desired function of the motor" (Final rejection, page 6).

Although appellants did not challenge the taking of Official Notice, they did, however, challenge (Brief, pages 11 and 12) the examiner's conclusion that "[t]he distinction of high speed pulse-width modulation is not a patentable distinction" (Final rejection, page 6). We agree with appellants that Ernest is completely silent concerning

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switching of the three pairs of switches "according to a sequence that provides high-speed pulse-width modulation" (claim 1). For this reason, the obviousness rejection is reversed.

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DECISION

The decision of the examiner rejecting claims 1, 2, 11, 13 and 14 under the first paragraph of 35 U.S.C. § 112 is reversed, and the decision of the examiner rejecting claims 1, 2 and 11 under 35 U.S.C. § 103 is reversed.

REVERSED

	Kenneth W. Hairston	)	
	Administrative Patent Judge	)	
		)	
		)	
		)	
	Michael R. Fleming	)	BOARD OF
PATENT	Administrative Patent Judge	)	APPEALS AND
		)	INTERFERENCES
		)	
		)	
	Stuart S. Levy	)	
	Administrative Patent Judge	)	

KWH:tdl

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