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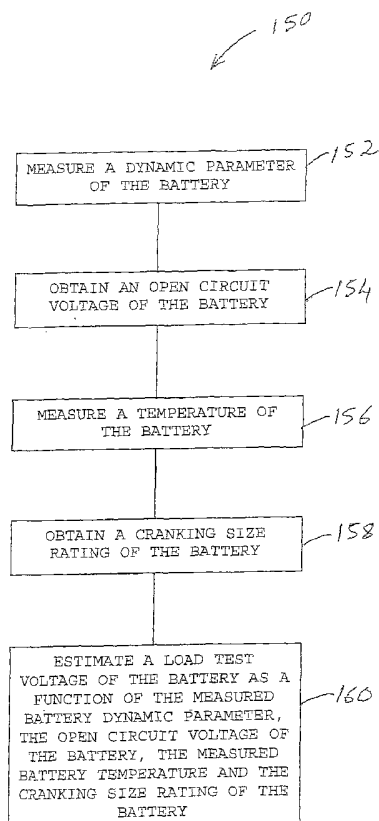
(43) International Publication Date
18 March 2004 (18.03.2004)

PCT

(10) International Publication Number
WO 2004/023580 A3

- (51) International Patent Classification⁷: **H01M 10/46** (72) Inventor: **KLANG, James, K.**; 211 Foxfire Court, Downers Grove, IL 60515 (US).
- (21) International Application Number: PCT/US2003/027698 (74) Agents: **REGO, Alan, G.** et al.; Westman, Champlin & Kelly, P.A., Suite 1600 - International Centre, 900 Second Avenue South, Minneapolis, MN 55402-3319 (US).
- (22) International Filing Date: 4 September 2003 (04.09.2003) (81) Designated States (*national*): DE (utility model), DE, JP.
- (25) Filing Language: English Published: — with international search report
- (26) Publication Language: English (88) Date of publication of the international search report: 31 March 2005
- (30) Priority Data:
60/408,542 5 September 2002 (05.09.2002) US
10/653,342 2 September 2003 (02.09.2003) US
10/654,098 3 September 2003 (03.09.2003) US
- (15) Information about Correction:
Previous Correction:
see PCT Gazette No. 27/2004 of 1 July 2004, Section II
- (71) Applicant: **MIDTRONICS, INC.** [US/US]; 7000 Monroe Street, Willowbrook, IL 60527 (US).
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: ELECTRONIC BATTERY TESTER CONFIGURED TO PREDICT A LOAD TEST RESULT



(57) Abstract: A method and apparatus is provided for rapidly and safely estimating the high-rate load test voltage of a storage battery utilizing open-circuit voltage (154), temperature (156) and a dynamic parameter (152) such as conductance or resistance. An output indicative of the condition of the battery is provided as a function of the estimated load test voltage (160) of the battery compared to industry standards without the necessity to charge the battery or discharge the battery with high-rate loads using bulky testing equipment.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US03/27698

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :H01M 10/46

US CL :320/132; 324/426

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 320/132, 134, 136; 324/426, 427, 430, 431, 433

Documentation searched other than minimum documentation to the extent that such documents are included in the fields
searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
NONE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- A	US 4,322,685 A (Frailing et al.) 30 March 1982 (30.03.1982), see abstract, flowcharts, col 2, line 50 to col 3, line 60.	1, 5, 6, 8-13, 17-19 ----- 2-4, 7, 14-16, 20

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"g"	document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means		
"P" document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search 25 NOVEMBER 2003	Date of mailing of the international search report 16 APR 2004
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer EDWARD TSO <i>Shawn S. Hoppe</i> Telephone No. (703) 305-0956