



(12) **United States Patent**
Svensson

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(54) **METHOD AND APPARATUS FOR AUTHENTICATING A CHARGING UNIT BY A PORTABLE BATTERY-OPERATED ELECTRONIC DEVICE**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(51) Int. Cl.⁷ **H01M 10/46**

(52) U.S. Cl. **320/106**

(58) **Field of Search** 320/106, 110, 320/114, 115, 135, DIG. 12

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,349,535 A	9/1994	Gupta	364/483
5,367,242 A	* 11/1994	Hulman	
5,369,352 A	11/1994	Toepfer et al.	320/56
5,420,493 A	5/1995	Hargadon et al.	320/15
5,506,490 A	4/1996	DeMuro	320/23
5,592,069 A	1/1997	Dias et al.	320/30
5,596,567 A	1/1997	deMuro et al.	320/5
5,602,454 A	2/1997	Arakawa et al.	320/2
5,717,307 A	2/1998	Barkat et al.	320/5
5,729,115 A	3/1998	Wakefield	320/2
5,734,252 A	3/1998	Griffin et al.	320/2
5,754,029 A	5/1998	Mann et al.	320/106

5,859,522 A	1/1999	Theobald	320/106
5,867,006 A	2/1999	Dias et al.	320/106
5,963,012 A	10/1999	Garcia et al.	320/106
6,031,353 A	* 2/2000	Banyas et al.	
6,295,002 B1	* 9/2001	Fukuda	

FOREIGN PATENT DOCUMENTS

EP	0684680 A1	11/1995
WO	WO 95/06994	3/1995

OTHER PUBLICATIONS

EPO; European Standard Search Report; Jun. 20, 2001.

* cited by examiner

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(57) **ABSTRACT**

A portable battery-operated electronic device authenticates/identifies a charging unit in order to prevent an incompatible and/or poorly designed or constructed charging unit from possibly damaging the portable battery-operated electronic device. The authentication/identification is effectuated over a wireless interface (e.g., using Bluetooth transceivers) when a portable battery-operated electronic device detects connection to a charging unit. The portable battery-operated electronic device requests data related to source and/or compatibility of the charging unit. If data is received and it indicates a proper source and/or compatibility, the portable battery-operated electronic device permits the charging. Otherwise, the portable battery-operated electronic device executes an action, such as preventing charging and/or memorializing information about the risky charging.

30 Claims, 4 Drawing Sheets

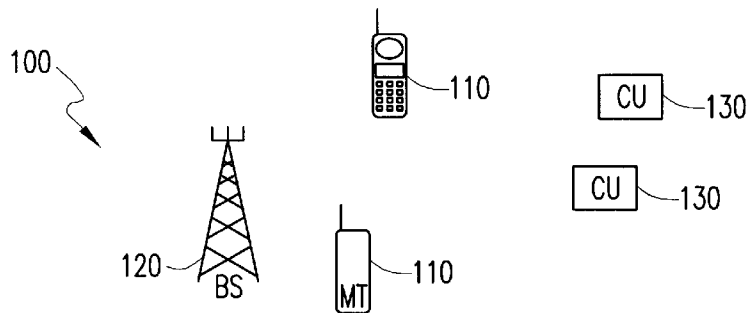


FIG. 1

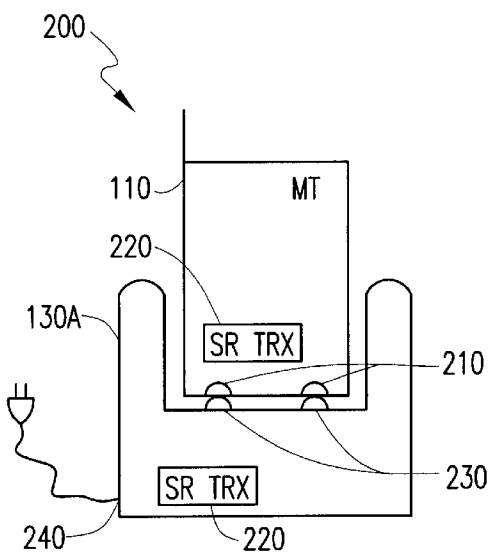


FIG. 2A

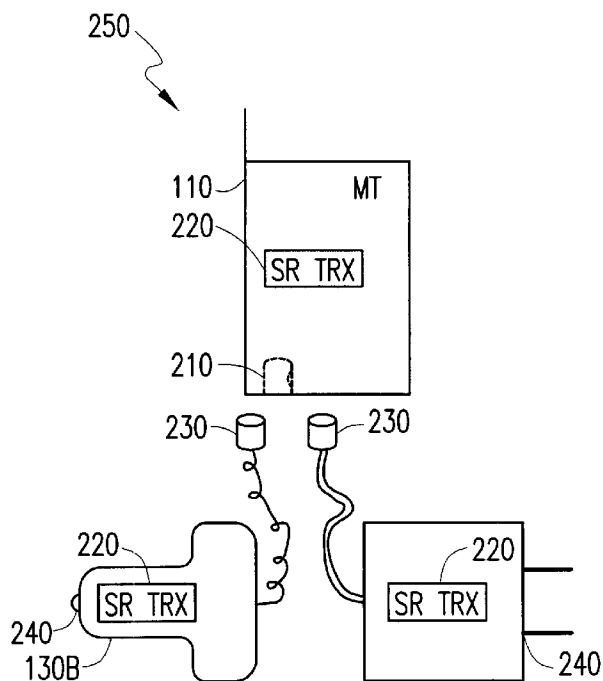


FIG. 2B

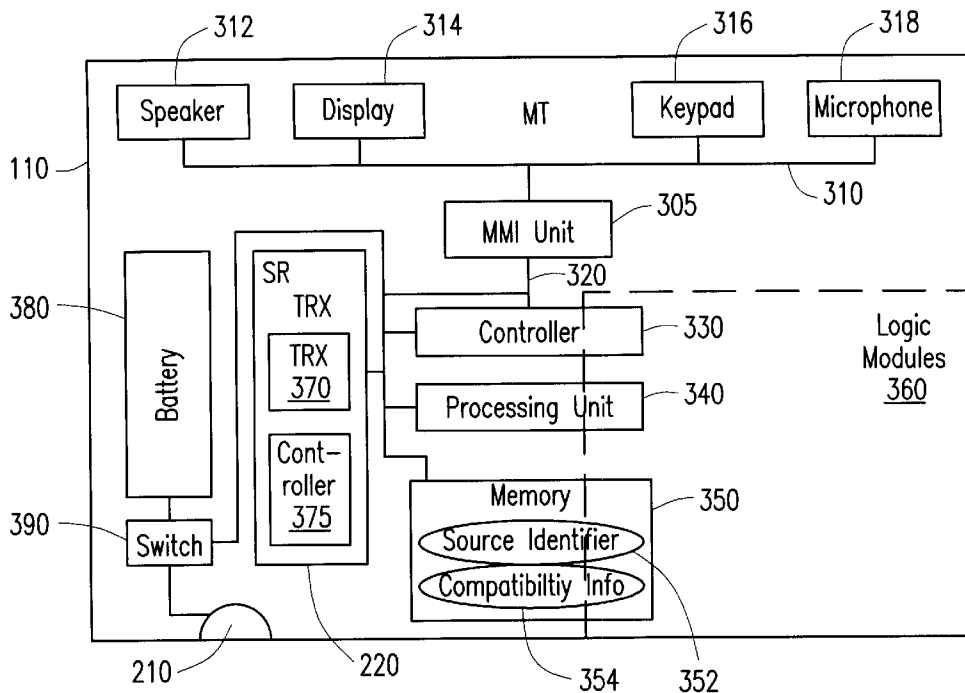


FIG. 3

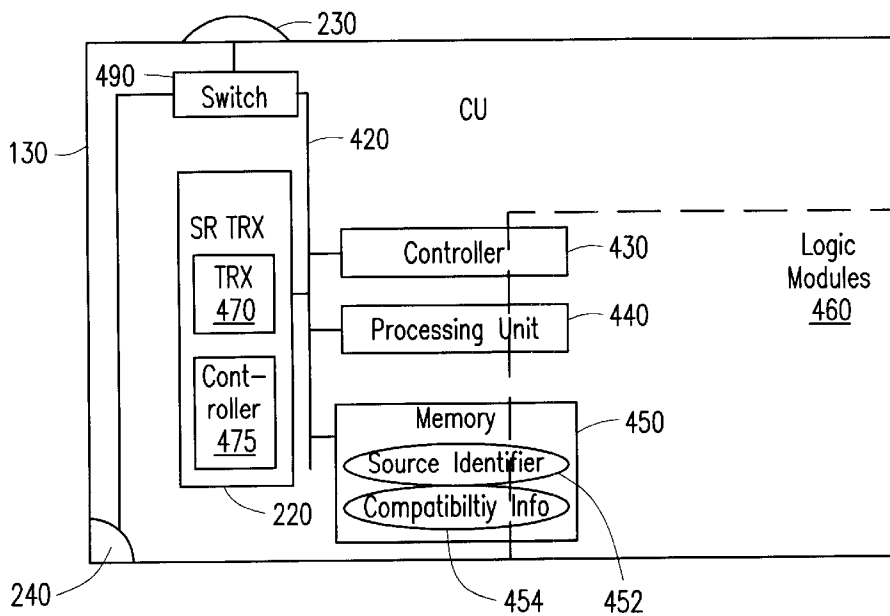


FIG. 4

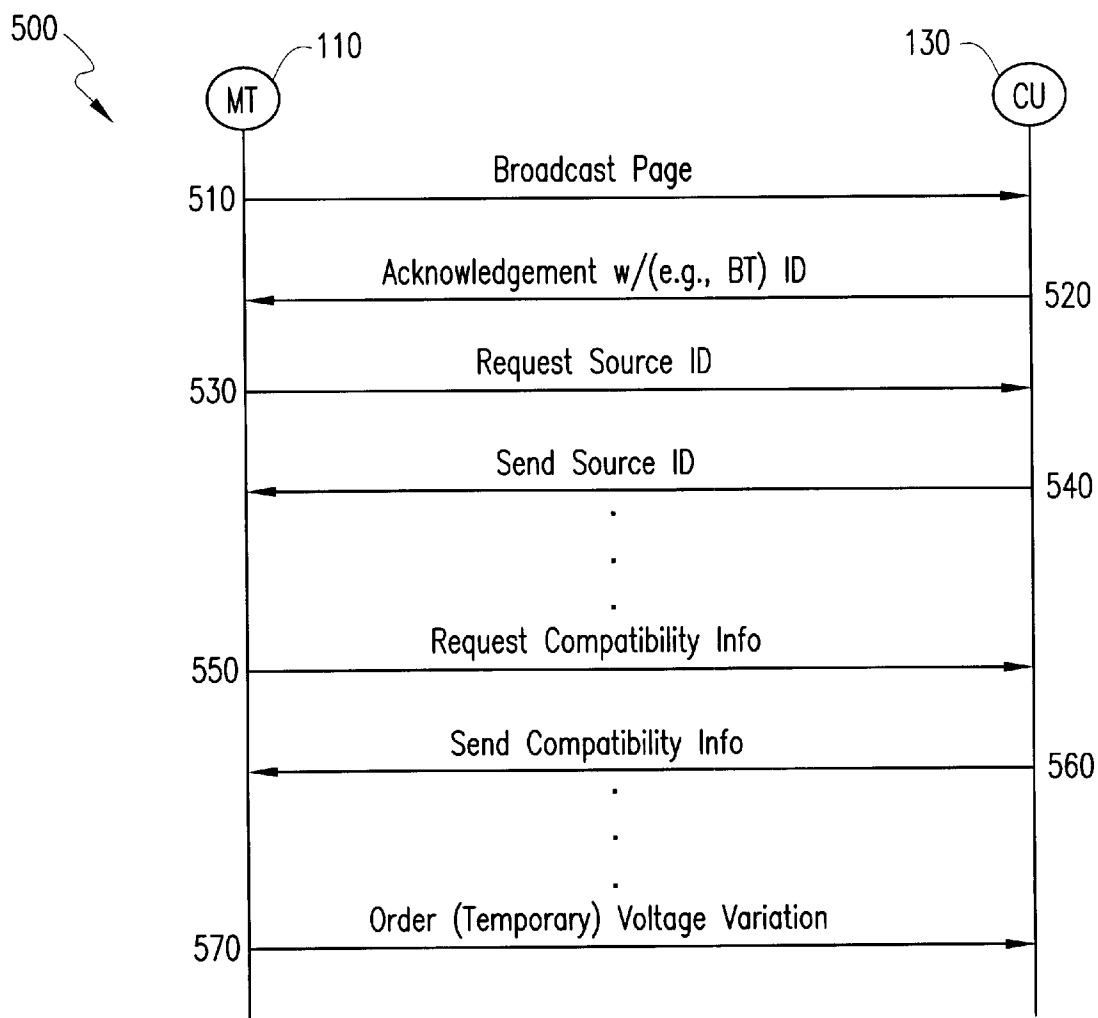


FIG. 5

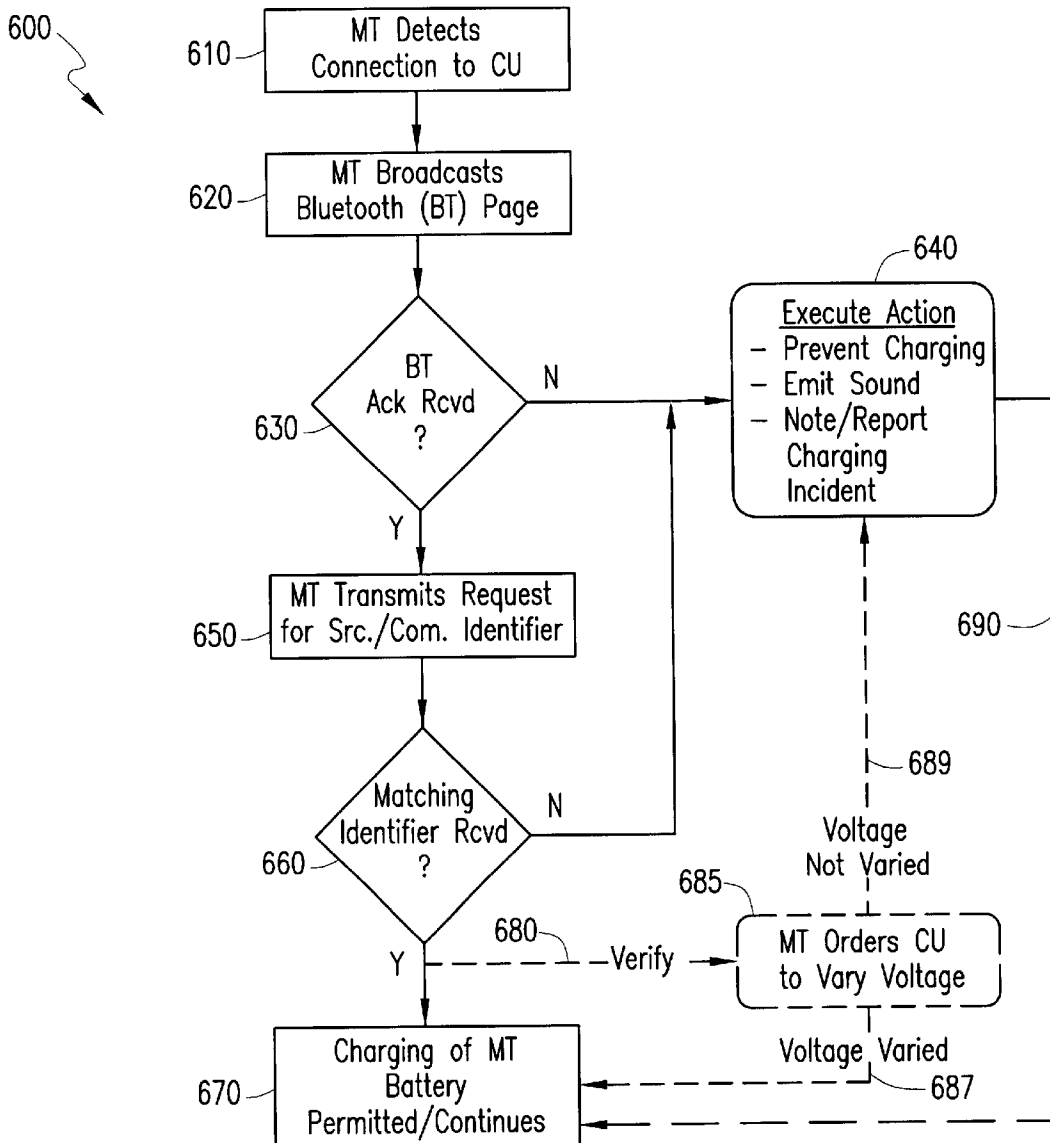


FIG. 6

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