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(12) **United States Patent
Bruwer**

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(54) **TOUCH SENSOR AND LOCATION
INDICATOR CIRCUITS**

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patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

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(65) **Prior Publication Data**

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Related U.S. Application Data

(63) Continuation of application No. 10/873,190, filed on
Jun. 23, 2004, now Pat. No. 7,084,531, which is a
continuation of application No. 09/806,860, filed as
application No. PCT/ZA99/00107 on Oct. 8, 1999,
now Pat. No. 6,984,900, which is a continuation-in-
part of application No. 09/169,395, filed on Oct. 9,
1998, now Pat. No. 6,248,089.

(51) **Int. Cl.**
H01H 3/26 (2006.01)

(52) **U.S. Cl.** 307/140

(58) **Field of Classification Search** 307/140
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,249,089 B1* 6/2001 Bruwer 315/200 A

* cited by examiner

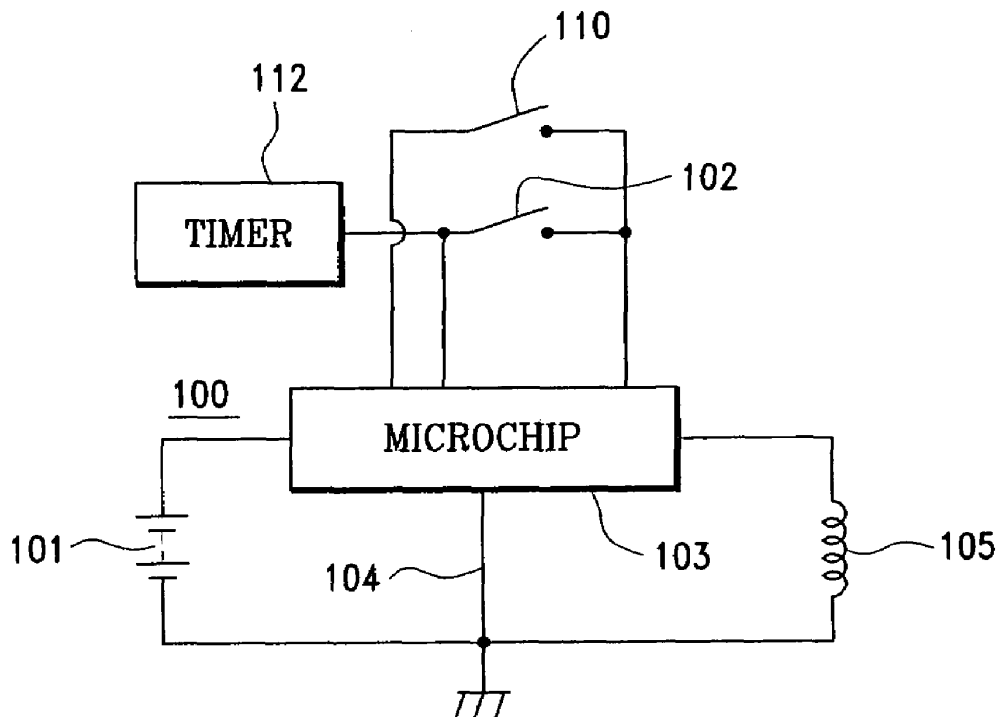
Primary Examiner—Robert L. DeBeradinis

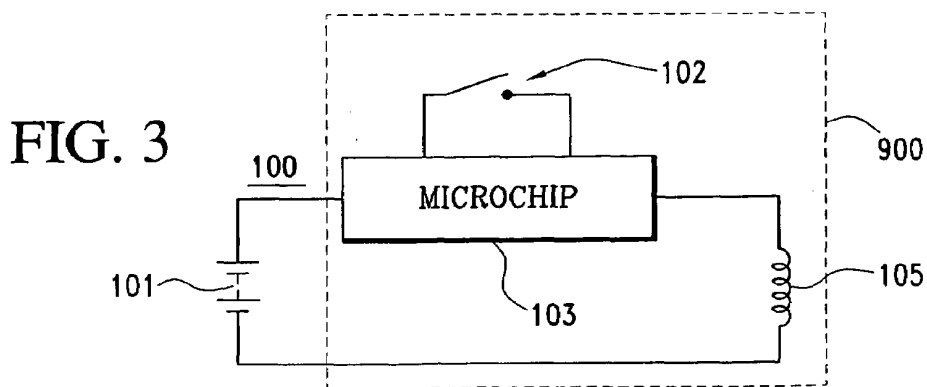
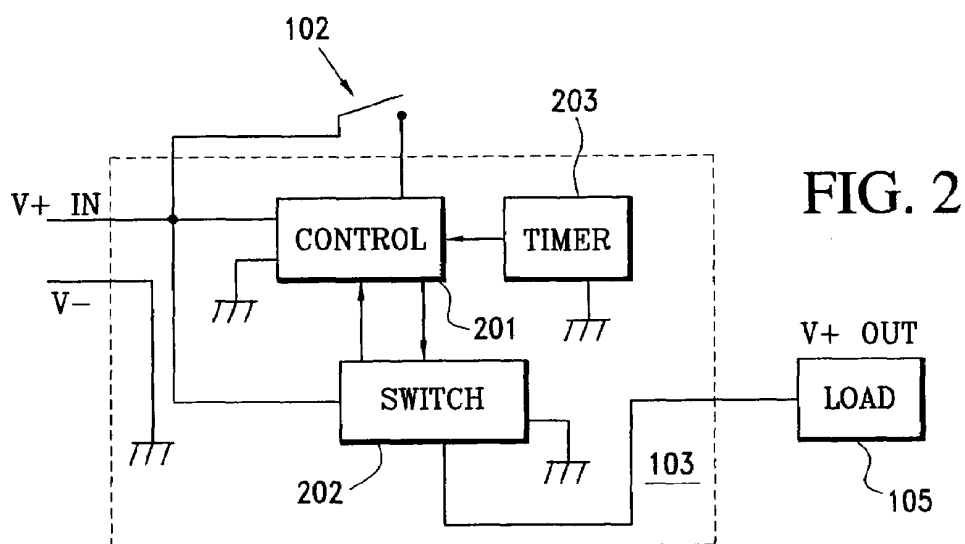
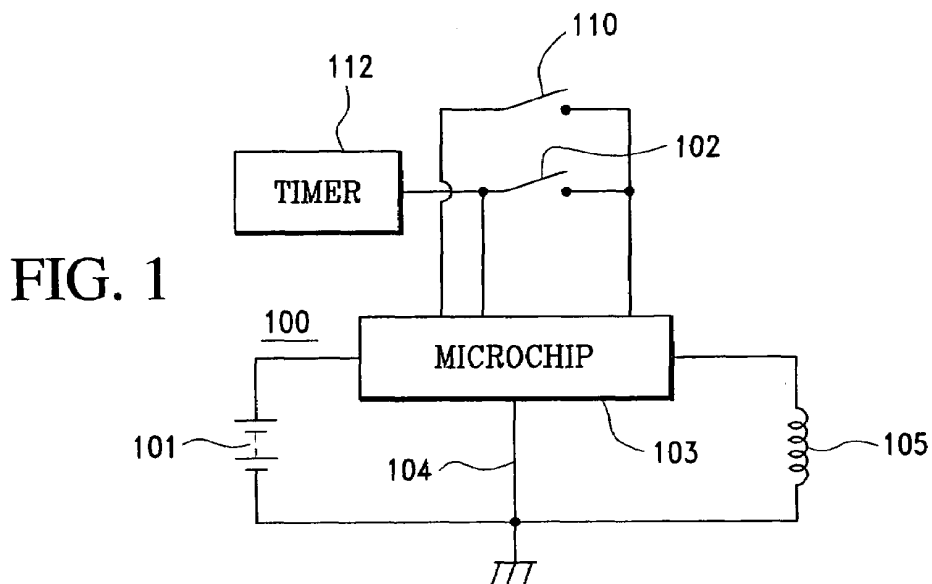
(74) *Attorney, Agent, or Firm*—Jones, Tullar & Cooper

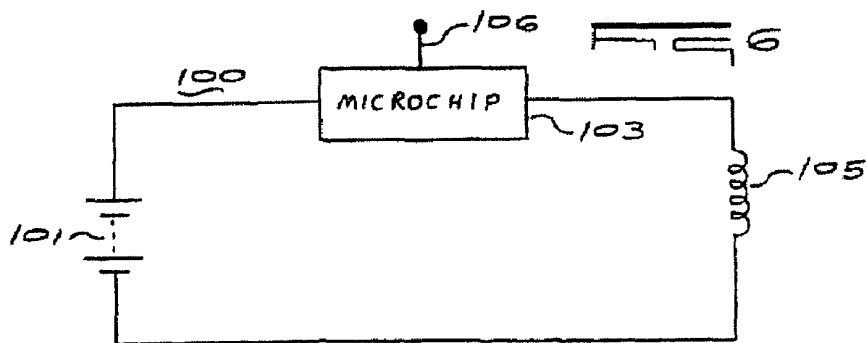
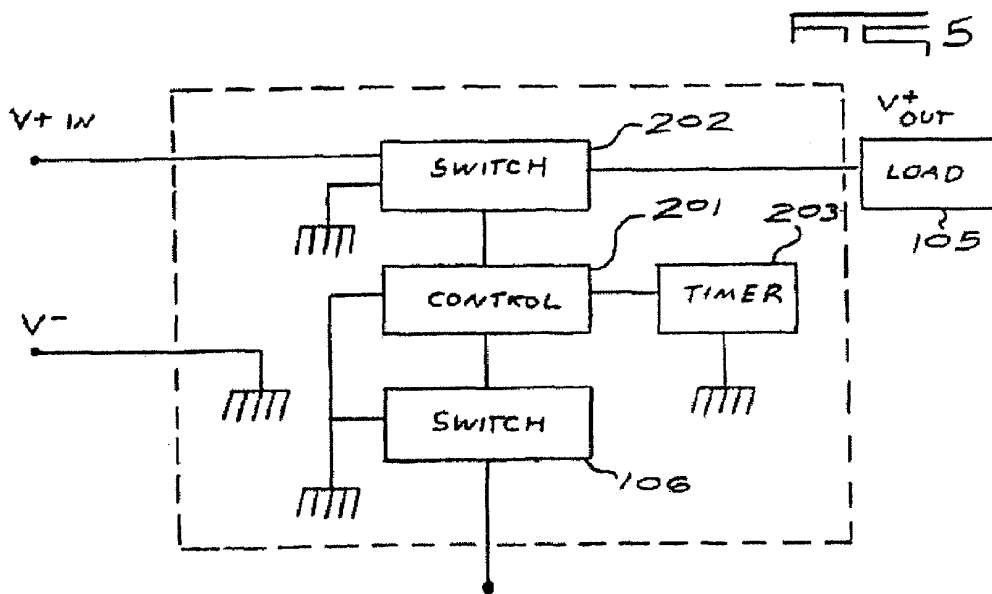
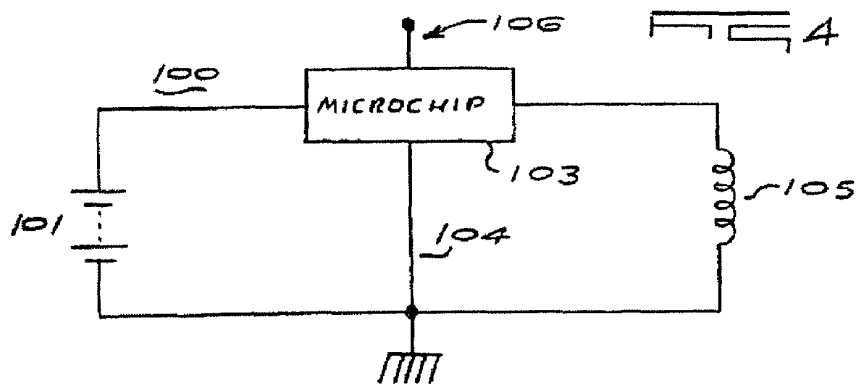
(57) **ABSTRACT**

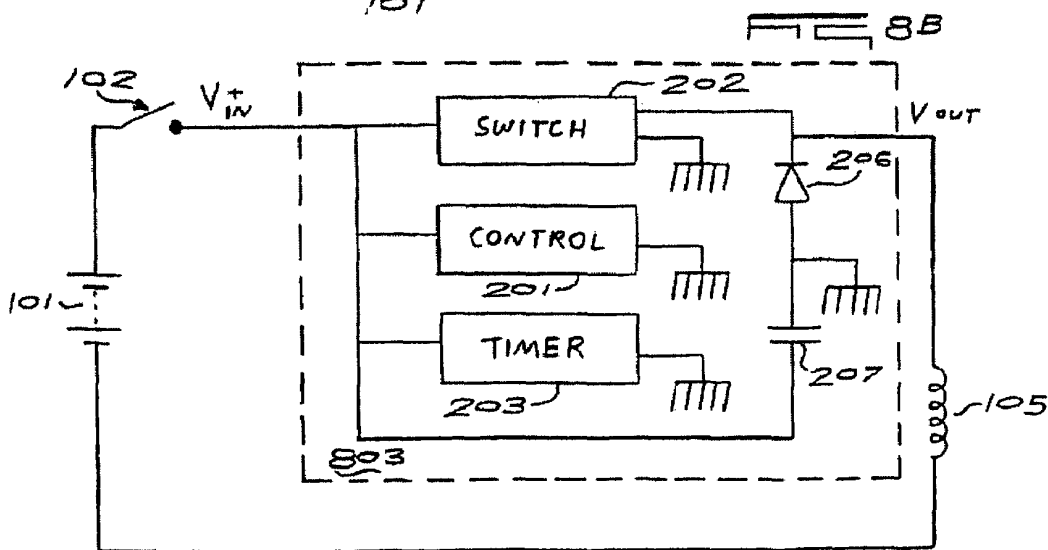
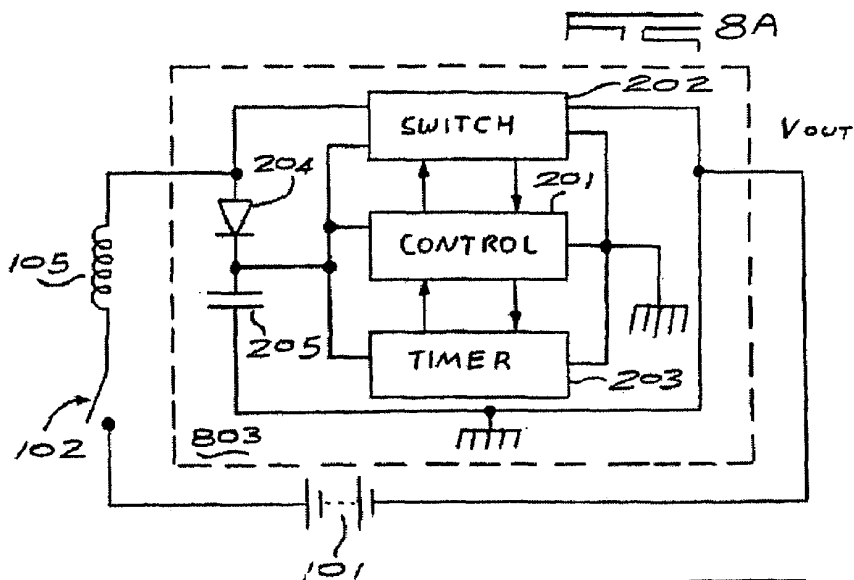
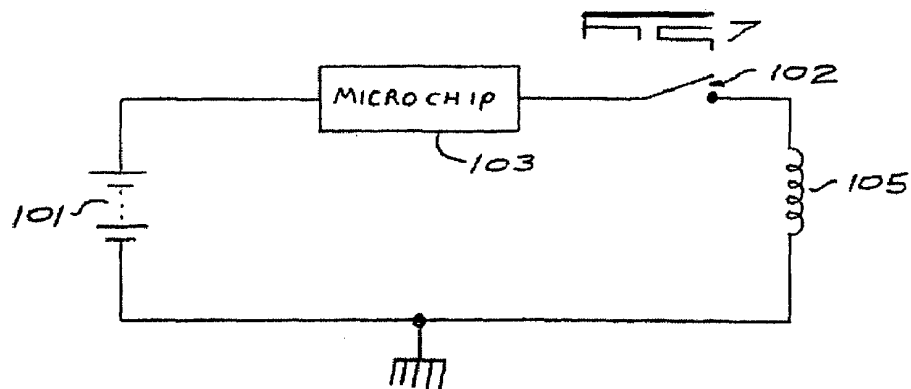
An electronic circuit for use with an exhaustible power source and load such as a light bulb, a radio or motor, includes a microchip with an input that transmits a signal to the microchip when the load is activated or deactivated. The input does not form a serial link between the power source and the load. The power switch, by on/off switching, controls energy flow from the power source to the load. The electronic circuit has an automatic delayed shut-off function for the load and, a find-in-the-dark indicator and a power source level indicator which are active when the load is not energized and the power source is not being charged. The input to the microchip acts as an activation/deactivation user interface. The microchip allows the user to select specific functions based on the time duration of activation signals, the time duration between activation signals and the number of activation signals at the input.

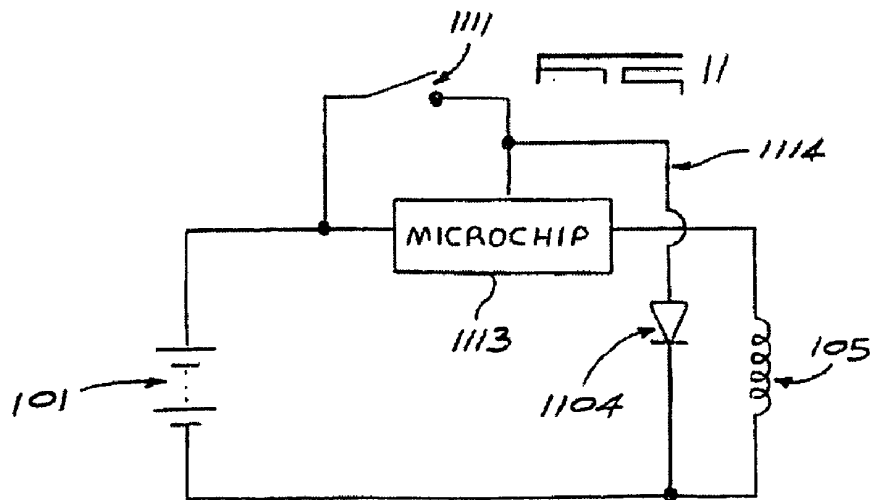
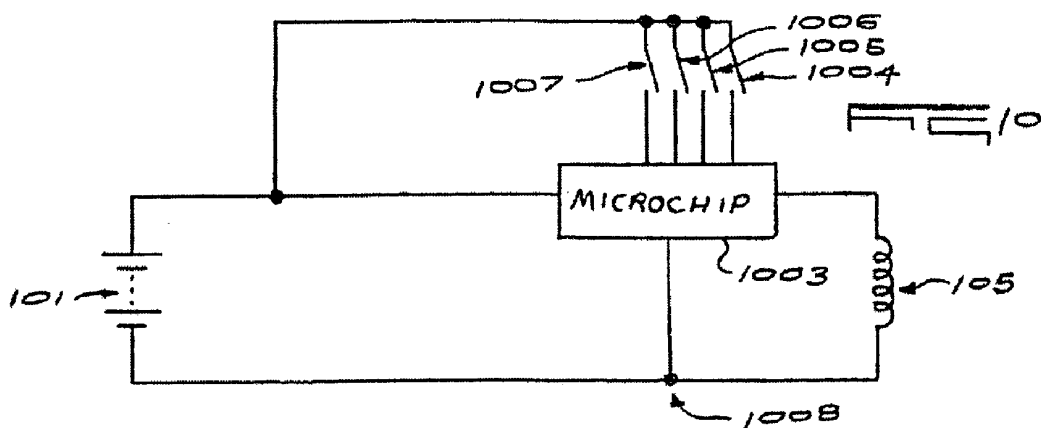
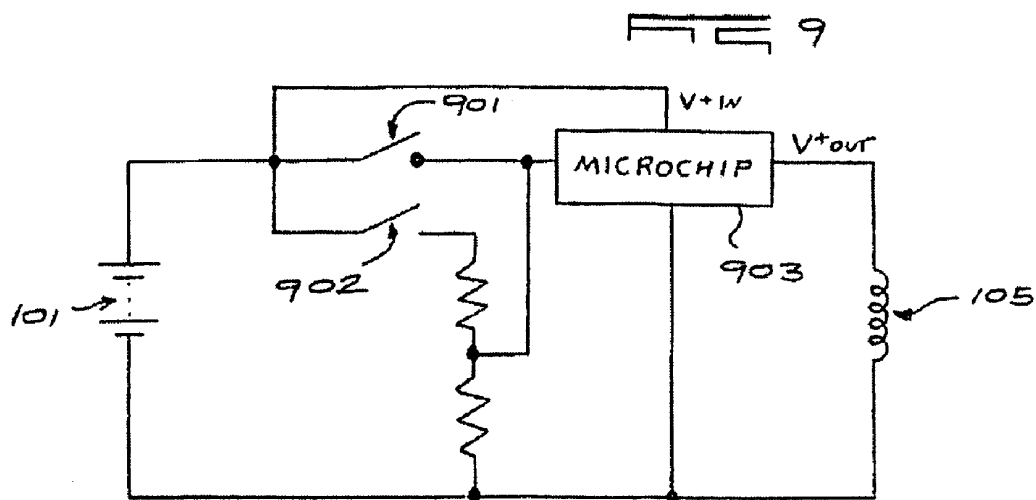
55 Claims, 6 Drawing Sheets











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