Claims

1. A lantern for use as and/or with a road marker, the lantern comprising:

a light source;

a sensor operable whilst the light source is operating to detect when the lantern has been impacted; and

signal generation means to generate an alert signal in response to the detected impact;

wherein the sensor and signal generation means are arranged to be powered by a battery used to power the light source.

2. A lantern according to Claim 1 having a sensor unit which comprises the sensor and the signal generating means; the sensor unit being held within a cavity of a casing of the lantern for holding the battery.

3. A lantern according to Claim 2 wherein the lantern comprises electrical conducting means to provide electrical connection between the battery and the light source, and that the sensor unit is supported against the terminals of the battery and/or the electrical conducting means.

4. A lantern according to Claim 2 or 3 wherein the sensor unit comprises an aperture and/or recess into/through which extends a battery terminal and/or the conducting means.

5. A lantern according to Claim 4 wherein the sensor unit comprises electrical contacts arranged adjacent to the aperture so as to make an electrical

connection with the conducting means and/or at least one terminal of the battery extending through the aperture.

6. A lantern according to Claim 7 wherein the electrical contacts are arranged on either side of the aperture

7. A lantern according to Claim 5 or 6 wherein the electrical contacts are provided on opposing faces of the sensor unit.

8. A lantern according to any Claim 1 – 7 wherein the sensor unit is mounted to at least one terminal of a battery.

9. A lantern according to Claim 8 wherein the terminals of the battery comprise spring wire coils.

10. A lantern according to any Claim 7-9 wherein the aperture/recess comprises a slot which extends inwardly from an outer edge of the sensor unit.

11. A lantern according to any Claim 10 wherein the slot extends diagonally inwards from a corner edge of the sensor unit.

12. A lantern according to any Claim 4-11 wherein the sensor unit comprises a printed circuit board and the aperture/recess is formed in the printed circuit board.

13. A lantern according to any previous claim wherein the alert signal is a broadcast via a radio or microwave transmission.

14. A lantern according any previous claim wherein the sensor comprises an accelerometer.

15. A lantern according to any previous claim adapted to be supported over a traffic cone.

16. A sensor unit for use in the lantern of claim 1 comprising a sensor for detecting when the lantern has been impacted, signal generation means responsive upon detection that the lantern has been impacted or tipped and to transmit an alert signal; wherein the body of the sensor unit is provided with an aperture/recess through which a terminal of a battery can pass; and electrical contacts adjacent the aperture to provide electrical connection between the sensor unit and the battery terminal.

17. A sensor unit according to Claim 16 wherein the aperture/recess comprises a slot which extends inwardly from an outer edge of the sensor unit.

18 A sensor unit of claim 16 or 17 mounted onto a terminal of a battery.

19. A method of constructing a perimeter breach alarm system comprising:

deploying a number of discreet sensor units at positions along a perimeter, each sensor unit comprising:

a sensor to detect when a portion of the perimeter proximate the sensor unit has been breached and a signal generating means to generate an alarm signal in response to a detected breach;

moving a location unit between the sensor units;

using means associated with the location unit to obtain position information of the location unit; and storing and associating the position information with a proximate sensor unit.

20. A method according to Claim 19 wherein the position information is transmitted by the location unit to the proximate sensor unit and stored by the proximate sensor unit.

21. A method according to Claim 20 wherein the signal generating means transmits the position information in response to detecting a breach.

22. A method according to any claim 19-21 wherein the sensor comprises an accelerometer.

23. A method according to claim 19 wherein the information relating to the location of the location unit is derived from a global navigation satellite system.

24. A method according to any claim 19 – 23 wherein the sensor units relay alarm signals broadcast by neighbouring sensor units.

25. A method according to any claim 19 - 24 wherein the location unit also comprises an alarm device having means to receive the alarm signal and to produce an audible and/or visual and/or haptic alarm.,

26. A perimeter breach alarm system comprising multiple sensor units located at positions along a perimeter; each sensor unit having a sensor to detect when the perimeter proximate that sensor unit has been breached and to produce a signal indicative thereof; means to receive the signal from the sensor and to generate a wireless alarm signal; and

an alarm unit adapted to receive the wireless alarm signal from one or more of the sensor units and in response to receiving the wireless alarm signal, to produce an audible or visual alarm.

27. A perimeter breach alarm system according to claim 26 wherein the system also comprises a long range transmitter unit, as compared to the sensor units, arranged to transmit a long range signal upon receipt of the alarm signal from a sensor unit.

28. A perimeter breach alarm system according to claim 27 wherein the long range signal includes the identity and/or position information of the sensor unit which emitted the wireless alarm signal; and/or the identity or position information of the long range transmitter and/or alarm unit.

29. A perimeter breach alarm system according to claim 26 or 27 wherein each sensor unit is provided with a unique identifier and/or position information pertaining to its location about the perimeter and the sensor unit sends the unique identifier and/or position information in response to a detected breach.

30. A method of transmitting data between a first unit and a second unit spaced remotely at positions about a boundary perimeter, comprising:

providing a perimeter breach alarm system comprising multiple sensor units spaced about the perimeter comprising: a sensor for detecting that the perimeter proximate the sensor unit has been breeched and signal generation means responsive upon said detection to transmit an alert signal;

transmitting the data from the first unit to a sensor unit which is proximate the first unit;

relaying the data between sensor units along the perimeter; and

transmitting the relayed data from a sensor unit to the second unit.

31. A method according to claim 30 wherein the sensor unit proximate the first unit relays the data together with information pertaining to the proximate sensor units identity and/or position; and that the sensor units along the perimeter relay the data and the information from the proximate sensor unit.

32. A lantern having a casing housing a light source; a battery having a body and terminals; and a sensor unit comprising the sensor, the signal generating means and electrical contacts for electrical connection to the battery terminals; and conducting means to provide an electrical connection between terminals of the battery and the light source;

and wherein the sensor unit is interposed between the battery body and the conducting means.

33. A lantern having a casing housing: a light source; a battery having a body and terminals; a sensor unit comprising a sensor and electrical contacts for electrical connection to the battery terminals; and conducting means to provide an electrical connection between terminals of the battery and the light source; and wherein the sensor unit is interposed between the battery body and the conducting means.

34. A lantern having a casing housing: a light source; a battery having a body and terminals; a sensor unit comprising a sensor and electrical contacts for electrical connection to the battery terminals; and conducting means to provide an electrical connection between terminals of the battery and the light source; and wherein the sensor unit comprises an aperture through which the conducting means and/or at least one terminal of the battery passes in order to provide electrical connection between the battery and the conducting means.

35. A lantern having: a casing housing a light source, a battery having terminals, and a sensor unit, comprising a sensor, forming part of a collision warning

system; conducting means to provide an electrical connection between terminals of the battery and the light source; and wherein the sensor unit has electrical contacts for electrical connection to the battery terminal, the sensor unit being interposed between the battery and the conducting means.

36. A lantern for use as and/or with a road marker, comprising:

a light source;

a sensor for detecting when the lantern has been impacted; and

signal generation means for generating an alert signal in response to a detected impact.

37 A lantern according to Claim 36 wherein the sensor and signal generation means are arranged to be powered by a battery used also to power the light source.

CLAIMS

1. A lantern for use as and/or with a road marker, the lantern comprising:

a light source;

a sensor operable whilst the light source is operating to detect when the lantern has been impacted; and

signal generation means to generate an alert signal in response to the detected impact;

wherein the sensor and signal generation means are arranged to be powered by a battery used to power the light source.

2. A lantern according to Claim 1 having a sensor unit which comprises the sensor and the signal generating means; the sensor unit being held within a cavity of a casing of the lantern for holding the battery.

3. A lantern according to Claim 2 wherein the lantern comprises electrical conducting means to provide electrical connection between the battery and the light source, and that the sensor unit is supported against the terminals of the battery and/or the electrical conducting means.

4. A lantern according to Claim 2 or 3 wherein the sensor unit comprises an aperture and/or recess into/through which extends a battery terminal and/or the conducting means.

5. A lantern according to Claim 4 wherein the sensor unit comprises electrical contacts arranged adjacent to the aperture so as to make an electrical connection with the conducting means and/or at least at least one terminal of the battery extending through the aperture.

6. A lantern according to Claim 5 wherein the electrical contacts are arranged on either side of the aperture.

7. A lantern according to Claim 5 or 6 wherein the electrical contacts are provided on opposing faces of the sensor unit.

8. A lantern according to any Claim 2-7 wherein the sensor unit is mounted to at least one terminal of a battery.

9. A lantern according to Claim 8 wherein the terminals of the battery comprise spring wire coils.

10. A lantern according to any Claim 4-9 wherein the aperture/recess comprises a slot which extends inwardly from an outer edge of the sensor unit.

11. A lantern according to any Claim 10 wherein the slot extends diagonally inwards from a corner edge of the sensor unit.

12. A lantern according to any Claim 4-11 wherein the sensor unit comprises a printed circuit board and the aperture/recess is formed in the printed circuit board.

13. A lantern according to any previous claim wherein the alert signal is a broadcast via a radio or microwave transmission.

14. A lantern according any previous claim wherein the sensor comprises an accelerometer.

15. A lantern according to any previous claim adapted to be supported over a traffic cone.

16. A sensor unit for use in the lantern of claim 1 comprising a sensor for detecting when the lantern has been impacted, signal generation means responsive upon detection that the

lantern has been impacted or tipped and to transmit an alert signal; wherein the body of the sensor unit is provided with an aperture/recess through which a terminal of a battery can pass; and electrical contacts adjacent the aperture to provide electrical connection between the sensor unit and the battery terminal.

17. A sensor unit according to Claim 16 wherein the aperture/recess comprises a slot which extends inwardly from an outer edge of the sensor unit.

18. A sensor unit of claim 16 or 17 mounted onto a terminal of a battery.