CLAIMS

1. An apparatus, comprising:
a sensor array configured to detect an explosion by sensing, at different heights within a base of a vehicle, mechanical deformation of the base of the vehicle caused by the explosion, wherein the sensor array comprises at least one sensor which comprises multiple frangible electrical connections, positioned at different heights within the base of the vehicle, and the at least one sensor comprises a cutter for cutting the multiple frangible electrical connections sequentially in response to a force from the explosion; and
control circuitry configured to respond to detection of the explosion by causing a groundwards force to be applied to the vehicle that depends upon inputs, characterising the explosion, provided by the sensor array.

2. The apparatus as claimed in claim 1, wherein the at least one sensor comprises:
at least one support;
a first frangible electrical connection, for conveying an electrical signal, held by the at least one support at a first height and configured to enable a force to be detected via breakage of the first frangible electrical connection; and
a second frangible electrical connection, for conveying an electrical signal, held by the at least one support at a second height different from the first height and configured to enable a force to be detected via breakage of the second frangible electrical connection.

3. The apparatus as claimed in claim 2, wherein the at least one support is configured such that at least a force having at least a first magnitude is required to be applied to the cutter in order for the cutter to break the first frangible connection and, after the first frangible electrical connection has been broken, a force of at least a second magnitude is required to be applied to the cutter in order for the cutter to break the second frangible electrical connection, the second magnitude being greater than the first magnitude.

4. The apparatus as claimed in claim 2 or 3, wherein the at least one sensor further comprises an outer housing that houses the at least one support, the

first frangible electrical connection and the second frangible electrical connection, defining an upper opening and a lower opening.

5. The apparatus as claimed in claim 4, wherein the outer housing is an electrical insulator.

6. The apparatus as claimed in claim 4 or 5, wherein the upper opening is covered by an end cap.

7. The apparatus as claimed in claim 4, 5 or 6, wherein the cutter is positioned on an interior surface of an end cap covering the lower opening and the cutter extends upwardly towards the first frangible electrical connection.

8. The apparatus as claimed in any of claims 2 to 7, wherein the at least one support, the first frangible electrical connection and the second frangible electrical connection are formed by a printed wiring board.

9. The apparatus as claimed in any of claims 2 to 8, wherein the at least one support comprises a first support arm and a second support arm, and wherein the first frangible electrical connection bridges the first support arm and the second support arm at the first height, and the second frangible electrical connection bridges the first support arm and the second support arm at the second height.

10. The apparatus as claimed in claim 9, wherein the first support arm and the second support arm comprise wiring to enable an electrical signal to be conveyed across the first and second frangible electrical connections.

11. A vehicle comprising the apparatus as claimed in any of the preceding claims.

12. The vehicle as claimed in claim 11, wherein the vehicle further comprises a belly plate, and the sensor array is located in a crushable material situated above the belly plate.

13. A method, comprising:

detecting an explosion by sensing, at different heights within a base of a vehicle, mechanical deformation of the base of the vehicle caused by the explosion, wherein the sensing comprises sensing a cutter sequentially cutting multiple frangible electrical connections, positioned at different heights within the base of the vehicle, in response to a force from an explosion; and responding to detection of the explosion by causing a groundwards force to be applied to the vehicle that depends upon the sensed mechanical deformation.