

- d. a multiplexer arrangement coupling the power source to a sense measurement element through each of the plurality of sensors in a sequential fashion.
2. The apparatus of claim 1 wherein the multiplexer arrangement couples the power source to the sense measurement element by coupling the power source to the input of the single sensor and coupling the sense measurement element to the output of the single sensor.
3. The apparatus of claim 1 wherein each sensor comprises two switches and a capacitor.
4. The apparatus of claim 1 wherein the multiplexer arrangement comprises an output controller that selectively couples a group of sensor outputs to the sense measurement element.
5. The apparatus of claim 1 wherein the multiplexer arrangement comprises an input controller that selectively couples the power supply to a group of sensor inputs.
6. The apparatus of claim 1 wherein the multiplexer arrangement comprises:
- e. an output controller that selectively couples a first group of sensors to the sense measurement element; and
 - f. an input controller that selectively couples the power supply to a second group of sensors, wherein only one sensor may be a member of both the first and second groups of sensors.
7. An apparatus comprising
- g. a first sense measurement element;
 - h. a first group of sensors comprising a plurality of sensors, each sensor capable of detecting a nearby object, and each sensor having an input and an output;
 - i. a second group of sensors that is a subset of the first group of sensors;
 - j. a third group of sensors that is a subset of the first group of sensors and has only one sensor in common with the second group of sensors;
 - k. an input controller that activates the second group of sensors;
 - l. an output controller that couples the third group of sensors to the first sense measurement element resulting in the operational coupling of the only one sensor in common to the first sense measurement element.
8. The apparatus of claim 7 wherein the sensors use capacitance to perform sensing.
9. The apparatus of claim 1 wherein each sensor comprises two switches and a capacitor.
10. The apparatus of claim 7 further comprising:
- m. a fourth group of sensors that is a subset of the first group of sensors, mutually exclusive with the second group of sensors, and has only one sensor in common with the third group of sensors.
11. The apparatus of claim 10 further comprising a second sense measurement element that is selectively coupled to a sensor in the fourth group of sensors at the same time that first sense measurement element is selectively coupled to a sensor in the second group of sensors.
12. The apparatus of claim 7 wherein the second group of sensors is a single sensor and the first group of sensors is a single sensor.
13. A method of sensing the position of an object with respect to an array of sensors comprising the steps of:
- n. providing an array of sensors, each sensor capable of detecting a nearby object;
 - o. selecting a second group of sensors that is a subset of the first group of sensors;
 - p. selecting a third group of sensors that is a subset of the first group of sensors and has only one sensor in common with the second group of sensors;
 - q. activating the second group of sensors;
 - r. coupling the third group of sensors to a first sense measurement element resulting in the operational coupling of the only one sensor in common to the first sense measurement element.
14. The method of claim 13 wherein the sensors use capacitance to perform sensing.
15. The method of claim 13 wherein each sensor comprises two switches and a capacitor.
16. The method of claim 13 further comprising the steps of:
- s. providing a fourth group of sensors that is a subset of the first group of sensors, mutually exclusive with the second group of sensors, and has only one sensor in common with the third group of sensors.
 - t. activating the fourth group of sensors so that a second sense measurement element is selectively coupled to a sensor in the fourth group of sensors at the same time that the first sense measurement element is selectively coupled to a sensor in the second group of sensors.
17. The method of claim 16 wherein the sensors use capacitance to perform sensing.
18. The method of claim 16 wherein each sensor comprises two switches and a capacitor.
19. The method of claim 13 wherein the step of activating the second group of sensors comprises applying power to the second group of sensors.
20. The method of claim 19 wherein the step of applying power comprises applying a logic one level to an input.

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