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ABSTRACT

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MOTION DETECTOR

5 The present motion detector unit effectively suppresses harmonic frequencies and is cost-effective to build. The motion detector unit includes a main casing which houses the main microwave circuit board. Enclosing the casing and the circuit board is a cover. An antenna circuit board is attached to the bottom side of the main casing. The cover has
10 partitioning walls at the bottom side of the cover which press against the main microwave circuit board when the cover is enclosed over the casing. The circuit on the main microwave circuit board includes a microwave oscillator for producing an oscillatory signal. The oscillator is coupled to a ground and to a filter which is a low-pass filter with a relatively wide stop
15 bandwidth. The filter is then coupled to a transmitting antenna. A power supply is routed through the transmission antenna and provides DC voltage to the microwave oscillator. The oscillator is further coupled to a mixer. The mixer is coupled to a filter which is in turn coupled to a receiving antenna.

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FIG. 3