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Federal Communications Commission
Laboratory Division
Equipment Authorization Branch

To Whom It May Concern:

Southwest Microwave hereby makes application for Certification of the Model 330 microwave field disturbance sensor to be used as security system around high profile military, industrial and commercial installations. The system is comprised of a transmitter and a remote receiver which produces an alarm if intrusions should occur between these two units. The Model 330 operates within the band of 24.075 to 24.175 GHz per section 15.245 of the Commissions Rules and Regulations. The transmitter is square wave modulated and is typically tuned to a center frequency of 24.125 GHz. The Transmitter and Receiver RF assemblies are identical to those used on the Southwest Microwave Model 310B which was certified under file number 31010/EQU 4-3-3 dated May 10, 1985 (FCC Identifier: CA6H9310B). The Model 310B has been deployed through out the world for over twenty-five years and has earned the respect of the entire security community as a reliable and predictable sensor.

The main difference between the Model 310B and the Model 330 is that the newer sensor incorporates extensive digital signal processing algorithms which enhance the probability of target detection and reduces the false alarm rate significantly. The Model 330 was designed to be compatible with Southwest Microwave INTREPID family of products which include the MicroPoint II fence sensor and the MicroTrack II buried cable system. Communication between sensors is accomplished by means of an RS 422 alarm polling bus having a maximum data rate of 57.6 kB/s. A complete description of the system operation is included in the Model 330 System Manual.

Initial testing was performed at Southwest Microwave and all final RF testing was performed by a certified test laboratory to insure compliance with part 15.245 of the commissions' rules and appropriate digital requirements.

The following items are included with this submission:

1. This letter of introduction
2. Model 330 Descriptive Sales Brochure
3. Model 330 System Manual
4. Block Diagrams
 - a. Model 330 Receiver
 - b. Model 330 Transmitter
5. Model 330 Pictures
 - a. Exhibit A Model 330 Transmitter with Antenna and Radome
 - b. Exhibit B Model 330 Transmitter side view showing Antenna and printed Circuit Board
 - c. Exhibit C Model 330 Transmitter showing Oscillator assembly and Transmitter Board with Shield installed
 - d. Exhibit D Transmitter Printed Circuit Board with RF Shield Can removed

- e. Exhibit E Model 330 Receiver without Radome showing Parabolic Antenna and Receiver printed circuit Board Exhibit F Model 330 Receiver without Antenna showing Printed Circuit Board with Shield Cans installed and Detector Module
 - f. Exhibit G Model 330 Receiver Printed Circuit Board without Shield Cans, and Detector Module.
- 6. FCC Label Location
 - 7. Final test data report from independent certified test laboratory

We trust that this information will meet with your approval and that a certification will be granted for the Model 330.


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