

TECHNICAL NOTE # 402

MICROWAVE SENSOR INTERFERENCE TO AVIONICS EQUIPMENT

Southwest Microwave Inc. has been manufacturing Microwave Intrusion Detection Systems for more than 30 years. In all those years there has never been an incident reported where these sensors have caused interference to any avionics equipment. On the other hand, we have had incidents where the avionics equipment interfered with our X-band sensors. For this reason Southwest Microwave, in the late 1970's, developed the first K-band Microwave Intrusion Detection Systems. They were designed to operate in high RF congested areas.

Southwest Microwave sensors are low power devices. The average Southwest Microwave sensor **surface** radiation level (when in operation) is approximately $.0186\text{mW}/\text{cm}^2$. This level rapidly dissipates at distances from the unit. For example, at one meter, the figure reduces to $.0012\text{mW}/\text{cm}^2$. With this low power it is very unlikely that these sensors will cause interference to avionics equipment.

Southwest Microwave Inc. K-band sensors are installed in many commercial airports as well as military sites worldwide. A sample of some of these sites are Barksdale AFB, Whiteman AFB, US Army Aviation Support Facility, Godman Army Aviation Facility, Dulles International Airport, DFW International Airport and Schiphol International Airport Amsterdam. The K-band sensors are also widely used in the US Air Force TASS program.