



MPS4100 MICROWAVE TRANSMITTER THEORY OF OPERATION

The PPI MPS4100 Microwave Transmitter operates in conjunction with a passive detector unit to provide a complete outdoor field disturbance sensor system. The MPS4100 Transmitter contains an oscillator and a rectangular, planar array antenna which transmits a directional signal fixed at 10.525 GHz with a duty cycle of about 50%. Oscillator operation is controlled by a timer circuit which switches oscillator input power at any one of six, user selectable, fixed modulation frequencies ranging from 3 KHz to 27 KHz in approximately equal increments. In operation, the transmitter beam axis is physically aligned with the receiving aperture of the respective passive detector unit up to 600 feet away. The passive detector is set to detect the same modulation frequency thereby allowing it to reject signals from other sources. Power for the MPS4100 Transmitter must be provided by a separate 12 VDC power supply.