LRM WIRELESS MODULE
TECHINCIAL DESCRIPTION

These products are intended for use with our other LRM Radiation Detection products, a collection of compatible detectors that are connected daisy chain fashion to provide user configurable sensors for nuclear interdiction. The Transmitter will be attached by the user to other detector modules via a cable, and will get its power from the cable (a sample module and cable for powering the unit is included). The Receiver will be attached by the user to a Display/Alarm module via a cable, and will get its power from the Display via the cable (also included).

TRANSMITTER

1. The LRM Transmitter utilizes a LINX ES transmitter module for RF generation and modulation and a LINX ANT-916-CW-QW antenna. The ES transmitter is mounted on a printed circuit board with a microprocessor that provides control logic for the ES module, a pre-transmission modulation synchronizing signal, and a checksum of the transmitted data. The antenna is threaded on to a reverse SMA connector that protrudes from one end of the cylindrical aluminum case. The completed product is not intended to be opened by the user, but for testing purposes can be accessed by removing the two 4-40 screws on either side of the connector assembly and sliding the connector and attached circuit board out of the case.

2. The LRM Transmitter operates on 3.3 volts at about 7 milliamps. For the purposes of this test this power is supplied by a battery pack via a cable.

3. The user configures the product by connecting various detector modules to it daisy chain fashion (up to 64 modules are possible). These modules are normally queried at a 2 Hz rate via a control signal from the product. Each module responds in turn by sending a three byte status message at a 6.25 Kbaud rate, which requires about 7 milliseconds per module. One module has been supplied for this test.

4. To save power, during each ½ second query the ES transmitter is enabled only as long as necessary to send the data from the modules. With no modules connected the ES transmitter is on for a minimum of about 12 milliseconds, and with the maximum number of modules the ES transmitter is on continuously. **This test article has been configured to have the ES transmitter on continuously as the worst-case situation for transmit power.**

5. There are no special procedures or handling techniques necessary with this product.

6. There are no hazardous operational modes for this product.

7. The product is complete and is packaged as intended for manufacture.