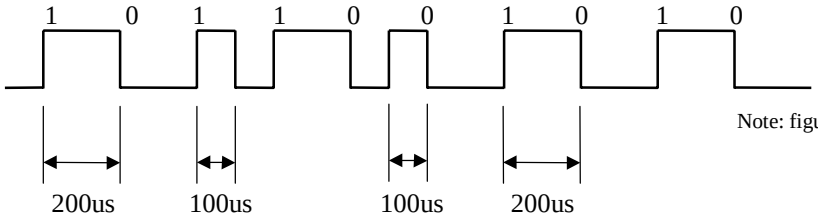
DETECTION SYSTEMS, INC.
130 PERINTON PARKWAY
FAIRPORT, NEW YORK 14450 USA
phone: 716-223-4060
FAX: 716-223-9180

General RF Alarm Devices Information for 5kbps

1. Data Modulation

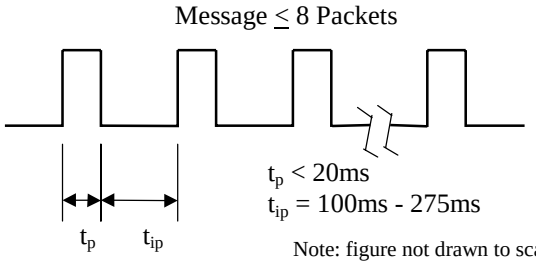
The data is modulated using the Manchester on/off keyed encoding scheme with 50% duty cycle shown below. The on-air format is defined with a '1' bit which is carrier turning on at the bit center and a '0' bit which is carrier turning off at the bit center.



Note: figure not drawn to scale

2. Message, Packet and Inter-Packet

A packet consists of all on-air bits that are transmitted to provide the system with the current status of a transmitter. A single message is composed of up to 8 packets of the same data. The time between packets is defined as a pseudo-random time length between 100 milliseconds and 275 milliseconds.



Note: figure not drawn to scale

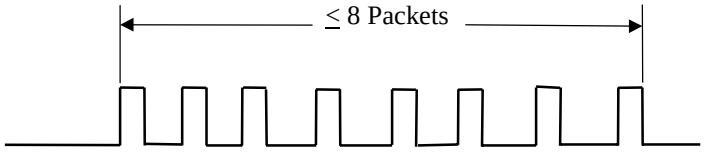
Note:
Packet width of ≤ 20ms with 50% duty cycle Manchester modulation makes the on-air time ≤ 10ms. Therefore, no transmission has more than 10ms of on time out of 100ms.

3. Transmission

A message will be transmitted when a control signal has changed, a system integrity test takes place or the supervisory time has expired.

Control Signal / Recognition Code

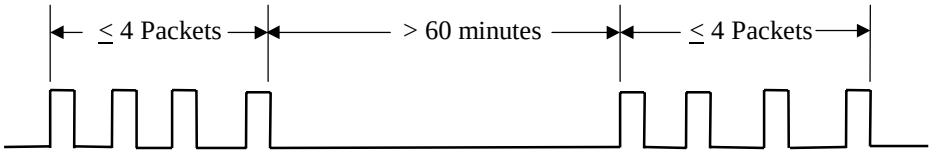
A single message, of up to 8 packets, will be transmitted when the control signal changes in a transmitter or a repeater. Up to 8 packets of recognition code will also be transmitted by the repeaters to ensure system integrity.



Note: figure not drawn to scale

Supervisory

To verify system integrity, the state of the inputs will be transmitted periodically. These transmissions consist of not more than 4 packets and will occur not less than every 60 minutes.



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