

5800 Wireless System

Introduction:

Ademco is the world's largest manufacturer of wireless transmitters. Our 5800 wireless system is recognized as an industry leader and is field proven technology with over 10 million transmitters installed and over 10 years of on the job experience in wireless security and fire applications.

Range and Susceptibility:

Ademco's 5800 wireless system operates in the 345MHz narrow band frequency range, and conforms to FCC part 15 low power section. The 345MHz narrow band has very low power and low frequency traffic. Unlike the 900 MHz band used by other wireless manufacturers that have many high power potential interferers. (i.e. wireless phones, wireless networks, etc.), the 345MHz band has very few potential interferers. The receiver used in the 5800 system has excellent selectivity and transmitters operate at the maximum power level allowed by the FCC. The open-air range for 5800 wireless has been tested to be over one mile. From direct field experience, it's long range and excellent immunity to interference makes 5800 suitable for almost any wireless application.

5800 Transmission Protocol:

The 5800 system uses ASK (Audio Shift Keying) as its transmission method. The message is 64 bits in length with 16 bits for CRC and 24 bits used for the transmitters unique serial number. There are 16 million serial numbers available eliminating the possibility for duplication.

On alarm, transmitter messages are transmitted 10 times per event. The spacing between repeated messages is different for each transmitter to avoid any potential clashes with other transmitters.

UL Test Results:

As part of its certification process UL performs two very rigorous tests. The first tests alarm signal reliably. 100,000 alarm signals are sent to a receiver during this test. UL allows for a total of 24 missed transmissions out of 100,000. The 5800 system passes this test with **zero missed transmissions**. The second test requires that 100,000 error signals be sent to the receiver and allows for a maximum failure rate of one false alarm. The 5800 system passed this test with **zero failures and zero false alarms**.