



DETECTION SYSTEMS, INC.

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General Information of RF3341 Transmitter

The RF3341 is a battery operated, hand-held 16 button RF transmitter. Using the “Entry Keys”, “Option Key”, or “Special Function Keys”, this product allows you to arm, disarm, and send special command signals to receiver(s) and repeater(s) in compatible Security Systems.

The RF3341 has a carrier frequency of 304 MHz with a SAW based RF oscillator. The RF power level and data format of each transmission are intended to comply with FCC/IC regulations on Intentional RF Radiators.

Frequency Control Devices Used:

1. One **800 KHz** ceramic resonator used for the microcontrollers’ oscillator.
2. One **304 MHz** SAW resonator used for the oscillator of the RF transmitter.

Pressing any button will initiate a wake up to the microcontroller. Upon decoding, the button function will be transmitted, the LED will flash and the sounder will beep to indicate that a transmission is being occurring.

The transmitter sends multiple packets under the following conditions:

4 packet signal transmitted when “Entry Keys” or “Option Key” pressed.

8 packet signal transmitted when “Special Function Keys” pressed.

(see attached copy of “General RF Alarm Devices Information for 5kbps” for detailed information.)

FCC ID of **RF3341** is: **ESV-0407-3**

Duty cycle correction factor calculation:

Each packet contains 76 data bits and the packet transmission time with 5KHz data rate is 15.2 ms.

Our **50% duty cycle Manchester coding** of the transmission ensures a **50% ON-AIR** time for every packet which is 7.6 ms. The minimum quiet time between packets is 100 ms.

Packet time = 15.2 milliseconds.

Quiet time between packets = 100 milliseconds.

ON-AIR time = (packet time) x 50% = 7.6 milliseconds, in 115.2 milliseconds.

Factor = $20 \text{ Log}(\text{ON-AIR time} / 100 \text{ ms}) = 20 \text{ Log}(0.076) = \mathbf{-22.38 \text{ dB}}$