

Wayne-Dalton Corp. • Ellyson Industrial Park • 3395 Addison Drive • Pensacola, FL 32514 • 850-474-9890 • FAX 850-475-6036

Date: July 24, 2006

Timco Engineering, Inc.
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Newberry, Florida 32669

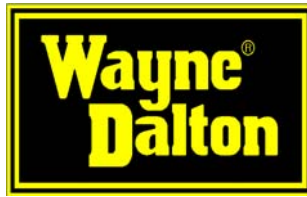
Re.: Duty Cycle Analysis for Wayne-Dalton Corp. **Model: KEP2-0001**
FCC ID: KJ8KYE-372CSW
IC: 3540A-KYE2C372

To Whom It May Concern:

Wayne-Dalton Corp., assures that the below analysis of transmission duty-cycle is accurate and complete.

Duty-cycle correction factor, per FCC Part 15, is based on a duty-cycle window of 100mS containing the “worst case”, highest duty-cycle, for the transmission under consideration. Since the message repetition rate of the KEP2 is 10 Hz (The message repeats every **100 mS**) the analysis is quite straight forward.

For the device in question the nominal timing element (TE) is 200uS; the transmission of a message consists of 12 preamble pulses each 1 TE in length with one TE of no transmission between them; followed by 2mS of no transmission; followed by 66 data bits, each 3 TE in length; followed by 1 TE no transmission and a stop bit 1 TE in length.



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The worst case data would be all '0's transmitted, that is 2 of the three TEs having RF energy transmitted. Therefore the worst case transmission time in a **100 mS** window is:
 $(12 * 200 \text{ uS}) + (2 * 66 * 200 \text{ uS}) + (1 * 200 \text{ uS}) = 29,000 \text{ uS}$ or 29%; for a duty-cycle correction factor of $20 * \log (.29) = -10.75 \text{ dB}$.

The device employs a 50ppm crystal for timing in the MCU and therefore the timing will not vary by more than .005% or 5 uS over an entire message.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Bardin". The signature is fluid and cursive, with the first and last names being clearly legible.

Richard Bardin,
Electrical Engineer
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