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**DRAFT**

ANSI C63.4 Test Procedures for  
Universal Garage Door Opener

Dear Ed:

This is to follow up our telephone conversation on May 12, 1995, regarding the appropriate test procedures for a "universal" garage door opener (UGDO) currently under development by Prince Corporation of Holland, Michigan. Like the earlier version of the UGDO (see my letters to you of July 20, 1992 and April 13, 1993), Prince's new model is designed solely for installation in motor vehicles.

By way of background, the UGDO is capable of learning the frequency and coding scheme (duty cycle) of most garage door openers on the market. The new model is designed to operate between 220 and 440 MHz and uses a single variable oscillator to learn/receive as well as to transmit.<sup>1/</sup> The frequency and duty cycle information are stored in one of three "memory banks." The UGDO is programmed to "ignore" door openers in the restricted bands per Section 15.205 of the Commission's rules.

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<sup>1/</sup> A VCO used to transmit is also used to learn/receive via a mixing circuit when a manual switch is held by the user. The device is programmed to search first for known door opener frequencies before going through the band on a single step basis. Ordinarily, it takes approximately 20 seconds to "lock in" and record the frequency. Under worst case conditions, however, the device could require 90 seconds to learn. All transmissions cease immediately as soon as the manual switch is released.