The UGDO is designed to adjust its power output dynamically, based on the duty cycle and frequency of the "learned" device. First, the UGDO detects the duty cycle of the learned device in the same "worst case" manner as prescribed under Commission rules. This duty cycle is then sorted into one of 32 ranges and a digital attenuator adjusts the output power of the device accordingly. If the UGDO detects a device with a duty cycle above 75%, the UGDO will not operate.

For each range, the output power of the UGDO is adjusted, based on the highest duty cycle in the range. Thus, for example, a transmitter whose duty cycle is in the middle of a range would have its power adjusted as if it were operating at the top of the range. In this way, the UGDO will always be trained to operate at power levels that are below the limits prescribed in the Commission rules. A second output power adjustment is then performed by the UGDO, based on the frequency of the learned unit. This adjustment is to correspond with the interpolated field strength limits set forth in Section 15.231 of the rules.

During our discussion, you agreed that the test procedures for the new UGDO would follow the same "3 sample" scheme which we had devised for the initial UGDO, as follows:

1. Sample 1, preset to transmit (CW) at 220 MHz, 330 MHz and 440 MHz, all set to operate at the highest duty cycle (estimated to be 72%);

2. Sample 2, preset to transmit (CW) at 220 MHz at the lowest duty cycle, 330 MHz at a 50% duty cycle and 440 MHz also at the lowest duty cycle; and

3. Sample 3, preset at the highest duty cycle and supplied with door opener using a low duty cycle for the purpose of demonstrating the UGDO's learn capability and dynamic output adjustment.

We also discussed a needed modification in the original test procedures. Specifically, you agreed that it would be permissible for Prince to use a 2 wire "harness" connected to the device, with the UGDO located in the center of the turntable. The wiring harness would be run approximately 1/2 meter to the longest edge of the turntable and then straight down to the battery. This test configuration will simplify testing for