

**Barry C. Quinlan**

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**From:** "Gene Bailey" <emctest@mindspring.com>  
**To:** "Certification Manager" <certification@curtis-straus.com>  
**Sent:** Wednesday, February 14, 2001 5:51 PM  
**Subject:** Re: FCC ID: OZR809-3543

Barry,

This is in response to your e-mail dated February 12, 2001 for FCC ID OZR809-3543.

1. The batteries used in the unit were new, fully charged batteries as required by 15.31(e).
2. During the emissions testing the EUT was rotated through three orthogonal axis. The maximum emissions measured was with the EUT in the upright position (intended installation). The "Test set-up" photograph was taken when the peak emissions were measured.
3. We apologize for the conflicting model numbers on the tables on pages 12 and 15. This is a typographical error that was overlooked. Should you require revised pages we can e-mail them to you to correct the model number.
4. As discussed during our recent telephone conversation, the worst-case duty cycle would be next to impossible to plot because, the worst-case duty cycle is tied to the physical address of the DS2417 in the transmitter. Some of the bits of address of the DS2417, the temperature data, the service pin flag and the CRC are used to create the physical message. The address of the DS2417 is not programmable or selectable since each DS part has a unique 1-wire address. To generate the worst case message, CPC used a mathematical analysis (see manufacturers letter in section 9 of the report) to get the largest number of 1's in the message possible and continued with the analysis.

Additionally, as discussed three similar transmitters in this product group have already received FCC grants with the same exact duty cycle information provided.

5. The EUT is factory set at a 3 minute cycle time, but may be special ordered with a 1 minute cycle time. The cycle time is set during manufacture of the product. If jumper JP2 is populated with a jumper, the transmission period is 1 minute. If JP2 is not populated the transmission period is 3 minutes. The firmware is limited to these two choices.
6. Radiated emissions were measured from 30 MHz to 4.18 GHz.
7. The antenna is manufactured by Linx Technologies, part number ANT-418-PW-QW and is permanently secured to the enclosure by placing its base through a 1/4 inch hole in the enclosure and securing it with a nut and washer. The nut is then covered with a bonding adhesive. The connection of the antenna to the PCB is accomplished by trimming the coax to length and crimping two Molex terminals part no. 16-02-0087 to the coax with a Molex 11-01-0209 crimp tool. The mating header (Molex part no. 70553-0001) is soldered to the printed wiring board.
7. The label material is a poly-carbonate with the markings back printed on the label. The label is provided with a 3M adhesive type 467 or 502. Since the label is back printed you would have to physically destroy the label to scratch off the marking.
8. The last three grants issued by the FCC were in behalf of Computer Process Controls, as indicated in item 4 above. The FCC ID for the grants are OZR809-3542, OZR809-3544 and OZR809-3548. You can go to the FCC web site and verify that EMC Testing Laboratories was the agent and test facility for these grants.

Should you have any questions or comments, please do not hesitate to contact us.

-----Original Message-----

**From:** Certification Manager <[certification@curtis-straus.com](mailto:certification@curtis-straus.com)>

**To:** Kent Stewart <[kstewart@emctesting.com](mailto:kstewart@emctesting.com)>

**Date:** Monday, February 12, 2001 10:32 AM

**Subject:** FCC ID: OZR809-3543

Kent,

We have conducted our review of the application and the following issues have been identified:

1. Please confirm that you used a new battery during the testing per 15.31(e).
2. Please confirm that you rotated the sample through three orthogonal axis during testing to maximize radiated emissions.
3. For information only, no response needed. The table on page 12 of the test report shows incorrect limits. The limits in the tables are based solely on the fundamental frequency and not on the frequency of the emission. Thus, for this 418MHz unit, all spurious not in a restricted band per 15.205 are subject to a 41.8uV/m limit at 10 meters unless 15.209 allows a higher limit. The sample is compliant with the correct limit with the data provided.
4. For information only. Conversion from 3 to 10 meters is 10.5 dB, not 10dB. Limits in tables on page 15 of the test report are 0.5dB too generous. We would prefer data acquired at the limit distance of 3 meters.
5. The test report is for model number 809-3543. One table (page 12) says model number 809-3545 the other (page 15) says 809-3548. Please explain.
6. Please provide oscilloscope plots or equivalent documenting the claimed duty cycle of 10.42%. Please show the actual on time for one and zero bits.
7. Please provide test data for documenting the 3 minute cycle time. Written observations from the lab or manufacturer are acceptable.
8. Please tell us the frequency range explored for radiated emissions.
9. Please supply front and back test setup photos.
10. Please describe the antenna used with the unit and its method of attachment to the product.
11. Please provide details of the label material.
12. It appears that your laboratory is not ISO Guide 25 (or equivalent) accredited. Please can you provide documentary evidence showing that the FCC have accepted at least 3 transmitter test reports from your laboratory.

Best regards

Barry C. Quinlan  
Certification & Telecom Manager  
Curtis-Straus LLC