

**Tests to Date:**

- Current Vehicle antenna durability testing
- Current vehicle antenna performance testing
- Current vehicle antenna improvement
- Prototype vehicle antenna system testing and development
- Prototype antenna system testing
- Competitive vehicle antenna system evaluation

**Experimentation conducted:**

- Antenna development for U van windshield antenna
- Antenna development for W car, GMX130, GMX170 backlite antenna system
- Antenna development for Corvette C5 hidden antenna system
- Antenna development for Cadillac Catera backlite antenna system
- Antenna development and evaluation of outside vendor antennas for future GM vehicle programs
- Antenna testing of domestic and foreign competitive vehicles
- Testing of Mid-Lux, GMTG and SCG durability vehicles
- Approximately 395 antenna system tests from January 3, 1997 to December 10, 1998.

**Hours of Operation:**

- 65 Hours at 89MHz
- 65 Hours at 95MHz
- 65 Hours at 107MHz

**Publications:**

- Delphi/Delco Electronics Radio System Specifications DE-RSS-1
- Entertainment System Design Requirements GM ESDR-1
- AM/FM Antenna Polar Pattern test Procedure R-12L-1

**Patents:**

- U.S. Patent Number 5,528,314: Transparent Vehicle Window Antenna

**Other Information:**

- Nominal Effective Radiated Power used for most testing is +21dBm (125.9 milliwatts)  
Maximum Effective Radiated Power does not exceed 1.26 Watts
- Transmitter identification is made at 20 second intervals in International Morse Code with type F2 emission at a peak deviation of 5kHz