



# 2009 Boom & Zoom Rules<sup>®</sup>

## I. Purpose & Intent

MECA, Inc. is a sanctioning body for competitors involved with car audio sports. MECA, Inc. is a membership association formed to encourage, support, and reward competitors in car audio sports. These rules are intended to outline the specifics of competition in Boom & Zoom contests. It is the responsibility of each competitor to review the rules, comply with the rules, and honor the rules in cooperation with event officials. MECA, Inc. strives to present each competitor with a fair and unbiased forum in which competition is regarded as worthwhile and enjoyable.

## II. Objectives

The contest determines the loudest SPL (Boom) and fastest (Zoom) vehicles tested by professional equipment. The judges, working with criteria established here, will objectively evaluate each competitor's vehicle and assign it to the correct competition class. Four classes are based on vehicle performance potential. The loudest vehicles in each competition class will be ranked according to sound pressure level [dB = Boom] indicated by the TermLab decibel meter. The fastest vehicles in each competition class will be ranked according to reaction time plus elapsed time  $[(RT + ET)10 = Zoom]$  indicated by track timing equipment. Each class is examined carefully to produce overall ranking in the Boom & Zoom contest, and the top three in each class will receive awards. The fastest vehicle in each class will receive an award. The loudest vehicle in each class will receive an award.

## III. Description of Classes

BZ1 - 4 or less cylinder motor naturally aspirated (No power adders)

BZ2 - 4 or less cylinder motor using forced induction or 5/6 cylinder motor naturally aspirated

BZ3 - 5/6 cylinder motor using forced induction or 8 cylinder motor naturally aspirated

BZ4 - 8 cylinder motor using forced induction or more than 8 cylinders, any configuration

## IV. Classification Guidelines

a) For purposes of the classifications above, a vehicle using a rotary engine shall be classed as follows:  
single rotary - 6 cylinder, twin rotary = 8 cylinder (e.g. 1993+ Mazda RX-7 Turbo would be in BZ4 class).

b) "Naturally Aspirated" shall be defined as using a motor with no external power adders such as Turbochargers, Superchargers, or Nitrous Oxide Injection. Some special circumstances may require a naturally aspirated vehicle to be classed in a Forced Induction class. All decisions made in this regard by the Head Judge are final.

c) "Forced Induction" shall be defined as using a motor which has external power adders such as Turbochargers, Superchargers, or Nitrous Oxide Injection. A vehicle that uses Nitro methane, or any fuel other than gasoline or DOT approved fuel, will be classed in a Forced Induction class. All decisions made in this regard by the Head Judge are final.

d) Vehicles must pass the technical inspection required by each specific racetrack. All rules of the host track must be followed at all times. Decisions made by the track management are final.

e) To be eligible to compete in Boom & Zoom the vehicle must contain an audio system powered by the charging system of the vehicle. The audio system must be capable of producing an SPL score of more than 100 dB [the lower limit of test equipment].

**Note:** Any attempt to hide or conceal a form of forced induction will result in immediate disqualification and forfeiture of all results and fees.

## V. Testing Procedure

a) Vehicle must be operated by the registered contestant. Hearing protection must be used by competitor for SPL test.

b) Competitor provides software or source for SPL test, i.e. CD, Cassette, MP3, AM/FM Radio, etc.

c) Boom test performed in pre-stage area, or other assigned area of track.

d) Sensor is placed in standard position: passenger side in seat, 26" in height, near the headrest.

e) Once sensor is placed into position, judge gives start signal, and Boom test is taken for 15 seconds.

f) Any combination of open door and/or windows on driver side and/or front passenger side may be used.

g) Upon completion of Boom test, sensor is removed, door is closed, and vehicle moves into position for Zoom test.

h) Competitor takes standard drag pass and brings timing slip to Judge.

i) Judge completes Boom & Zoom score sheet using the SPL score and timing slip data to compute the SPLed score.

## VI. Scoring

Rankings of competitors are established by determining the loudest SPL score measured in decibels [dB = Boom] and the fastest vehicle measured by elapsed time plus reaction time times a factor of 10  $[(RT + ET)10 = Zoom]$  to determine the SPLed score. The points from Zoom are subtracted from Boom points to determine the SPLed score. The competitors' SPLed scores are ranked from highest to lowest. The competitor with the highest SPLed score wins the class. Awards are given to the remaining competitors for 2nd and 3rd places, based on SPLed scores. Special awards are given in each class to the "Loudest" and also the "Fastest" competitors.

## VII. Tie-breaker

When there is a tie in SPLed points, the Boom score [dB] will serve as the tie-breaker. If that doesn't break the tie, the speed in MPH will serve as that tie-breaker.

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