



LTSA



RADIO CONTROL TRANSPORTATION I & II

I. PURPOSE

The R/C racing competition is designed to promote teamwork and problem solving among students as they acquire technical skills to build, operate and maintain a radio-controlled car. Each team will be given laps in these categories for their car: (a) racing, (b) appearance [workmanship, painting, and decals], and (c) a short technical report



II. TIME LIMITATIONS

Each chapter must enter its car(s) at the time of registration. Each chapter is responsible for having their car "race ready" at the time of registration. Each chapter can hold on to their batteries but the car, remote and report must be turned in at the time of registration. Each race team must be at the orientation session at the track at the schedule time in the conference program.

III. SPECIFIC REGULATIONS

- A. All entries must be submitted for general inspection at the time of registration and may be subject to inspection at any time.
- B. Each chapter may enter up to five racing teams, comprised of two chapter members. Each team must have a different car to race.
- C. Each team member must race their own car (Two heats and each team member must drive their car in a heat).
- D. The technical report entered from a previous year will not be allowed.
- E. The technical report is to be four or less double-spaced, typewritten or electronically composed pages.

The technical report will be retained by the competitive events committee and will not be returned. Therefore it is advisable for students to make a duplicate copy for themselves prior to submitting it.

The technical report must include the following items but not limited to these:

1. General information about the car; The brand name of the car, The color of the car, and the name of the manufacture.
2. The radio frequency that your car operates on and if you have the ability to change frequency. (also the additional frequencies if you can change).
3. The horsepower of the electric motor. (also include if the motor is a standard motor or



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IV. PROCEDURES



A. At the registration desk, Transmitters of all Participants (including any car's transmitters not entered) will be impounded. They will be returned to the assigned racers just before each race and/or practice and collected again immediately after each session or race. They will be returned to the participants at the announced time. Each car must carry the project label assigned and each transmitter must have the test label on it.

Since there is the possibility of accidental or purposeful radio interference during race sessions, no transmitters will be allowed outside the race area at any time. Members in violation of this rule subject themselves and their chapter to disqualification from this and /or other events.



- B.** Cars may be raced on a dirt, macadam, concrete, tile, wood, carpet, or synthetic track. Teams must be prepared to change tires to adapt to racing situation. The track will be configured by the race committee.
- C.** All team members must be present at the orientation prior to the start of the race. --- The race director may make revisions in certain procedures as he/she deem necessary for certain conditions.
- D.** Each team will consist of two chapter members. Each member will take turn being a driver and a pit man. Each driver will drive that car for one of two heats as the other team member works as the pit man.
- E.** Each heat will have a duration of four or five minutes. Time will be determined by the race director.
- F.** A car may be repaired at anytime during the race. The repair must be made in the pit area and not on the track. If the car cannot make it to the pit area then The car may be carried to the pit area. Once repairs are completed the car may return to the race from the pit area. Any partial laps completed before repairs are made will not be counted.
- G.** The car must be two wheel drive. If the car is four wheel drive then the front wheel drive must be disconnected.



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V. OTHER SPECIFIC RULES

A. GENERAL RULES

1. Unruly or unsportsmanlike conduct will not be tolerated. People judged to be in violation will be requested to leave the area. Any team member in violation may subject the entire chapter to be disqualified from this and/or other events.

B. TRACK

1. See Section IV, Part C.
2. Water jumps, water obstacles, water hazards, or any other types of water puddles will not be used. Jump ramps and/or other obstacles may be used.



C. BODIES

1. All cars must race with a body. Bodies should resemble actual bodies used in real off-road or oval track races.
2. All cars must have bodies properly secured and removable. If the body falls off, the car must be pulled off the track and have the body fasten securely before returning to the track. No car is allowed to cross the finish line without being properly fasten. Rubber bands are not permitted to hold the body in place.

D. INSPECTIONS

1. A tech inspection will be held prior to the race.
2. Cars may be inspected at any time as determined by the race director.
3. A driver who fails to submit to vehicle inspection will be disqualified.

E. QUALIFYING

All cars that are qualified will be allowed to race. Each car must have its own team.

F. SPORTSMANSHIP

1. Unsportsmanship driving (i.e., intentional hitting of other cars, short coursing, and corner diving) is not permitted. Anyone doing so may be disqualified at the judgment of the race director.
2. Abusive, inappropriate language by any team member will result in lap reductions or disqualification.

G. DRIVING RULES

1. No car is to be driven at any time in reverse of the track traffic. It will be a one lap



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H. TURN MARSHALLS

1. Drivers will be asked to be turn marshalls. Failure to do so will result in the loss of five laps in each race.
2. Turn marshalls may not repair or damage cars. All repairs must be done in the pit area. Turn Marshalls must only replace cars on the track.
3. A car running on the track has the right of way over a car that has gone off the track, turned over, or otherwise has problems. Turn marshalls must treat all cars equally.

I. GENERAL TECH RULES

1. Nons shock-absorbing front bumpers are not permitted. All stock bumpers, after-market or student made bumpers must meet this requirement.
2. No sharp, protruding objects are allowed on cars. No sharp ends allowed on sway bars.
3. Only standard power supply will be permitted.
4. Drive motors are to be stock production motors available commercially. Stock motors that come with the cars are legal. Motors that show signs of tampering will be disqualified.
5. The car must be a standard commercial model, It may be a kit form but cars bought of the shelves of stores will be legal.
6. The car must be powered by an electric motor only.
7. The car is to be two-rear drive only. Four-wheel drive cars are permitted but the front-drive must be disengaged.



J. MODIFICATION RULES

Cars may be modified as listed below but no points will be awarded for modifications. As used in these rules, production or stock means parts used in the original design and manufacture of the particular car being raced. Allowable changes to the production car is listed below.

1. It is permissible to add any decals, Protective equipment (such as: nerf bars, roll cages, bumpers, netting, lighting, etc.) That will enhance the realism of the car. Wheelbase must remain stock.
2. Wings may be added if it is in scale with the car.
3. Suspension must remain in stock configuration. stock single-shock dampers per wheel are to be in the instruction book(or original) position. Adjustable coil over the springs are legal on shocks. Shocks may be changed to after market type. Front and rear suspension arm may be changed to another material, as long as the



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6. The stock radio box may be replaced with a lightweight box, but the linkage must be in stock position.

**Any radio may be used as long as you know your frequency.
Any resistor or electronic speed control may be used.**

7. Ball bearings may be added anywhere on the car as needed with the exception to the motor.
8. Plastic or metal gears may be replaced with a more durable gear as long as the gear ratio and gear case remains stock.
9. Axles may be replaced with a stronger material type but must remain stock configuration.
10. All parts that are replaced on the car must be stock configuration with the exceptions mention above.

VI. REQUIRED EVENT PERSONNEL AND EQUIPMENT

- A. Event coordinator and a chief judge
- B. Judges (2 or 3) to evaluate appearance, Modifications and technical report
- C. Race Marshall and a Pit judge
- D. Material and equipment
 1. Racing forms
 2. Storage are for cars and Transmitters.
 3. Race cones (to layout raceway)
 4. Official racing forms for evaluation of appearance, and technical reports.
 5. Track

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LEVEL I or II (Circle One)

OFFICIAL RACING FORM

ENTRANT'S ID																			
Evaluative Criteria																			
Appearance12 laps Max workmanship 4 laps Painting3 laps Detail5 laps																			
Technical Report ...12 laps Max Mechanics 4 laps (spelling, grammar, organization, neatness) Contents ... (Quality of data).... 5 laps Completeness 3 laps																			
Race (number of laps) 1 st Race 2 nd Race																			
Rule YilationsMinus laps																			
Total laps																			

I certify these results to be true and accurate to best of my knowledge and ability. _____ Judge's Signature