

Southern California Timing Association



Rookie Orientation Booklet *El Mirage*

Introduction

Welcome to Land Speed Racing!

In Southern California, Land Speed Racing takes place under the control of the SCTA - Southern California Timing Association, which represents 11 member clubs, of which, you must be a member of one to race. Each club has its own requirements for membership and contact can be made via the SCTA web site or found in the back of the SCTA Rule Book.

The El Mirage dry lakebed is located 40 minutes to the west of Palmdale or 30 minutes to the east of Victorville. The Bureau of Land Management manages the lakebed, and permits racing there for 6 months of the year – May through November (excepting August). A BLM fee is charged to enter the lakebed, so make sure you have either an SCTA season pass, or be prepared to pay \$15 per day at the El Mirage Visitor's Center when you enter.

Our racing boundaries are clearly defined by cones and signs and are patrolled by club members to ensure members of the public remain outside the dangerous areas (where the racing is taking place). Similarly, it is vitally important that racing vehicles remain inside the coned areas, as an accident involving members of the public would finish racing at El Mirage forever.

The SCTA is made up of volunteer members who have a love of racing and are prepared to put in large amounts of time to make it happen for everyone. It is a close-knit community that is dedicated to making racing safe and enjoyable for everyone who wants to try their hand at it.

Please remember that this book serves only as a guide to the Rookie Driver / Rider process. The final rules are found in the current year SCTA Rulebook, or for El Mirage specific rules, the current year El Mirage Procedures.

Your First Race

After much blood, sweat and tears (not to mention money) you will be prepared for your first race as a rookie. Many rookie drivers are indoctrinated by more established race teams, while others come to the lake with a new car and new drivers. Below is a list of items you need to have or be prepared for:

- **Logbook** - New logbooks are available for purchase at the Registration trailer for \$10. You must have a logbook to go through tech inspection. The serial number of this book is also stamped on a sticker which is placed on the roll cage of the car, ensuring that important information can be recalled. An example of a few important pages in the logbook can be found in Appendix A of this booklet.
- **Tech Inspection** – Tech inspection is carried out by experienced volunteers who use a checklist to help you ensure your car / bike meets minimum SCTA standards. For a new vehicle or one that can exceed 200 mph, two inspectors are required to check the car out. Bailouts are also done at this time.



- **Inspection Form** – This form serves two purposes, first it records all of your vehicle and class information, as well as driver details. The reverse side contains the inspection form. It is important to fill this in correctly, as failure to do so could cost you a record. If in doubt – ask! A copy of the inspection form can be found in Appendix B of this booklet and on the SCTA web site.
- **Driver's Gear** – Drivers must have all their safety gear available for inspection during tech. During this time SFI tags, expiry dates and specifications are examined to ensure all equipment is safe and appropriate for the speeds you plan to do.

You should make sure you have the following items for inspection:

Car Driving Apparel

- Racing suit
- Helmet
- Gloves
- Racing boots
- Head sock
- Racing socks
- Head and neck restraint device

Motorcycle Riding Apparel

- Rider's Helmet
- Leathers
- Boots
- Gloves

- Bailouts – Every new driver must complete a bailout to prove that they can safely exit the vehicle in a timely manner. This is done fully suited up (with race suit, gloves, boots, helmet and neck restraint device on) and fully belted in. The driver must demonstrate their knowledge of the fire system, parachute release and other safety related equipment appropriate to the vehicle. They also must show that they can reach every important system, with the belts done up. It is a good idea to practice this process a few times before going to inspection.



New driver going through a bailout drill

- Registration Trailer – After having successfully completed tech inspection you take all your paperwork to the registration trailer. There you will receive your inspected sticker that will go on the window of your vehicle. You will not be permitted to race without one – so don't lose it! At this point you also hand over your completed Medical Form and sign a wavier that allows you to get your driver's wristband. Other team members will also have to sign the waiver and get wristbands also. Team members are issued a red band, drivers, a yellow.



Registration Trailer

Rookie Orientation

Rookie Orientation takes place at El Mirage at 4pm on the day before racing begins (3pm in November). This initial meeting is only the first part of the orientation process. The group will meet at the Registration Trailer, but may move to the SCTA buildings weather (wind) depending. The Rookie Orientation Director, or other experienced driver takes the orientation. All rookie drivers and crews have to attend this meeting and bring with them a tow vehicle with a working CB. After the classroom portion is completed, drivers and crews will drive down the course with the instructor pointing things out on the CB to familiarize everyone with the course.

In the morning, all rookies will meet the instructor again and attend the drivers meeting, which begins at 7:10am at the start line. The rookies will stay on the start line and watch the first 5 - 10 cars leave the line. This is an excellent opportunity to learn how it's done. The group will then go together down to the finish line (timing lights) and again watch and learn how to stop and where to pull out. Only after this last portion of the instruction, will rookie stickers be issued by the instructor.

As rookies, you and your crew will be under much scrutiny. Each run will be watched carefully and signed off by an official on the rookie sticker attached to your helmet.

Topics that will be covered during Rookie Orientation are:

Course description

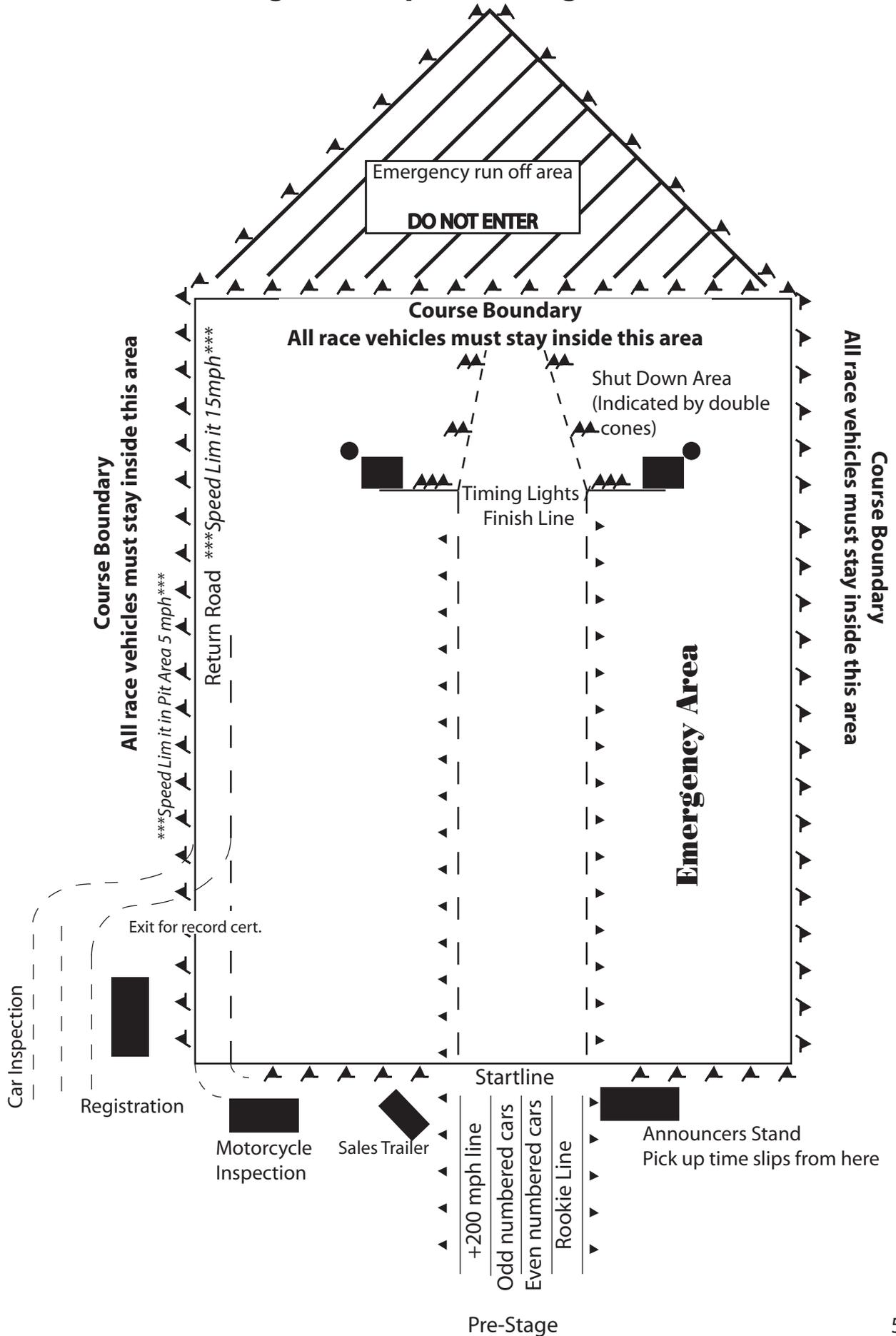
The course is 1.3 miles long, 90 feet wide with a 1.3-mile shut down area after the timing lights. Orange cones designate the "track" and additional marker cones long the side of the course indicate our safety zones. Patrols sit at intervals along these coned off areas to prevent the public entering. The finish line is clearly marked with two very large orange end signs and large orange balloons. The shut down area narrows down and is shown by double sets of cones lining the track. A line of orange cones approximately 3 feet apart shows the end of the course. This line is also known as the back door. Racing vehicles are **NOT PERMITTED** outside these cones or outside the safety zones to the side.



Various vehicles going through the finish line / timing lights

El Mirage Land Speed Racing Course

Access Roads ***Speed Limit - 25 mph***



Pre-Stage

Drivers Meeting

Driver's meeting takes place at 7:10am at the starting line and follows the patrol meeting that starts at 7am. All drivers and crew members have to attend. Information about course conditions and procedures for that day are given at this time.



Crew Preparation

- Role – The crew's job is to prepare the driver/rider and the race vehicle for a safe pass. It helps to go over everyone's roll, before getting up to the line.

Jobs may include:

- Crew Chief (organizes everyone else),
- Dressing the driver / rider
- * Strapping the driver in (includes wrist restraints)
- Warming up the car or motorcycle
- * Pulling the fire bottle and parachute pins (always show the driver the pulled pins)
- * Putting up the window net
- Providing shade for the driver / rider
- * Cleaning the windscreen

Driver / Rider safety – Very Important. Some teams have a checklist of things that must be completed prior to a pass.

These could include:

- Driver / Rider gear - do you have it all
- Leathers have button to prove they have been checked at tech inspection (motorcycles only)
- Kill switch lanyard is present (motorcycles only)
- * Checking restraints
- * Checking arm restraints
- * Ensuring driver can reach everything in cockpit
- * Fire pins, parachute pins
- Going over instructions / procedures

Other Considerations:

- Driver/ Rider comfort – Sitting in the hot sun in a fire suit or leathers isn't comfortable. Provide an umbrella or some sort of shade.
- Driver / Rider instructions – Driving or riding a race vehicle at high speeds for the first time is stressful and there is a lot to remember. Go over the instructions and procedures with your driver / rider multiple times.

Equipment

- * Fire bottles – ensure all safety pins are pulled (check bottles for secondary pins)
- * Parachute – ensure parachute safety pin is pulled – the driver will activate the chute when the cross the finish line.
- Kill switch is attached to rider (motorcycle only)
- Helmet is securely done up
- Working CB in tow vehicle – make sure it is tuned to the correct channel (1 or 10)
- Fire Extinguisher in tow vehicle
- Tool box in tow vehicle – be sure to include Dzeus tools if appropriate.

*specific car items

Line procedure

As a rookie, you will line your car up in the extreme right hand line. You will be permitted to race after the first 25 cars have left the line. When your vehicle is 3 back from the line, **be ready in your car - fully strapped in and ready to go.** It is beneficial to spend LOTS of time sitting in your vehicle getting familiar with the systems. *Try finding everything with your eyes closed.*



Rookie Pass – Driver / Rider and Crew

As a rookie, you will attend a two part orientation which will familiarize you and your crew with the procedures at El Mirage. The rookie will also be under close scrutiny and each pass will be monitored by either the Rookie Director or appropriate Tech Chair, Chief Inspector, Starter or other official.

The rookie will need to make a clean pass under 150 mph. The officials observing the rookies may also designate other speed limits depending on the skill and performance of the driver / rider.

A clean pass is the goal and that means that the rookie followed the Starter's orders, went through the timing lights, pulled the chute (car only), kept the race vehicle straight, turned to the left (on a non-eventful run), and stopped on the course side of the return road (about 3 feet from the cones). Your crew is also under scrutiny. Officials are watching to see that they left the starting line turned to the left and drove down the return road, keeping to the speed limit. They then met you, and towed you back along the return road, at the speed limit.



Driving the course

Where to go?

The Starter releases the race vehicle from the starting line. It then goes down the course, keeping within the cones. When leaving the starting line on your motorcycle, use caution not to spin the rear wheel. The course surface can be much looser than it looks.

How to stop?

As a rookie, you **MUST** pull your parachute (car only) and come off the throttle when you cross the finish line / timing lights. In a car, the chute safely slows the vehicle, without relying on the brakes. It also prevents the course from getting cut up. On a motorcycle, coming off the throttle slowly, allows the rider time to slow down gradually, while maintaining control of the motorcycle and remaining inside the course boundaries.

Where to stop?

After crossing the finish line, the race vehicle pulls the parachute (car only) and when slowed down sufficiently, turns off the course to the left and comes to a stop **INSIDE** the cones that mark the return road. Be careful to stop away from other race vehicles. You don't want to run over their parachutes, or have them run over yours or you.

What next?

After stopping, exit the vehicle or dismount your motorcycle and have a look around to make sure everything is ok. Do you still have all your parts? Are all the tires still inflated? Is there any smoke or fluid loss? Gather up your parachute (if driving a car) and wait for your tow vehicle. Keep an eye out for other drivers / riders who are exiting the course.



Emergencies

What could go wrong?

Many things can go wrong with a run and not all of them are emergencies. If in doubt, turn to the RIGHT. Safety crews are watching and will come out to help.

- Fire – In the event of a fire it is important to stop safely, shut off your engine and activate your fire system. Turn out to the RIGHT. Safety crews will come out and help put out the fire.
- Engine blows up – Losing an engine may also cause a fire, in addition to leaving parts on the course. Turn out to the RIGHT. The course will also have to swept for parts.
- Lose control
 - Spin – pull the parachute and stop safely.
 - Can't control car – stop in the safest manner possible. Don't worry about not getting off the course – stop safely.
- Can't see the course
 - If at any time you can't see the course it is your responsibility to come to a stop safely. This may include stopping in a straight line on the course.
 - Dust – Dust gets into a race vehicle through any hole or imperfect seal. If you are unsure where you are and can't see – pull the parachute (car only) and stop.
 - Obstruction – Problems have included drivers who can't see over the steering wheel, dust storms that effect vision and things covering the windscreen.



IF YOU CAN'T SEE PULL THE PARACHUTE AND STOP!

Race vehicle isn't running right

- Pull the parachute (car only) and turn out to the LEFT before the finish line and try again. This leaves the course clear for the next people in line behind you.

Race vehicle feels strange

- This may be a case of inexperience or something may indeed be wrong. If in doubt, pull the parachute (car only) and turn out to the LEFT before the finish line and get some help. There are many experienced drivers or riders who would be happy to help if you are unsure.

Motorcycle Specific Issues

- Tire spin at high speed can and will cause tire failure.
- Stopping should be done cautiously and smoothly. Using the brakes too harshly can cause a loss of traction and control. Sitting up in the wind to slow down can also cause a loss of control.

What do I do Next?

Licensing Runs

- While competing as a Rookie driver / rider, you are able to work through your licencing levels, under the close supervision of the Rookie Director, Tech Inspectors and Chairs, Race Director and Starters. The licencing levels are in your rule book. After running at the perscribed speed and making a clean run, you then take your timing slip to the Starter who saw you off and ask nicely if they would sign your license. This slip is then taken to the Record Certification Inspector at Impound, who will issue your licence for that speed level.

Next Meet - What Happens

Starting Position

- Your starting position is determined on your performance at the previous meet (or meets for that racing season). It is posted on the SCTA website under El Mirage Results.

Records

- After your Rookie runs at your first meet, you are able to run against records. If you are lucky enough to break a record, then your race vehicle will need to be towed to impound (either Car or Motorcycle) and will be inspected for record certification. You will need the timing slip, log book and entry form (which was given to you at registration). The Record Certification Inspectors may look at fuel, engine size, the timing slip and class compliance. If everything is correct, the Record Certification Inspector will then issue you your record certification sheet. A formal certificate and red timing plaque will be issued at a later date.

Appendix A

M. Macmillan JDM CRX

Official Vehicle Log Book Southern California Timing Association



No 3042

NOTE: It is the purpose of this Log to maintain an individual safety and legality history of the vehicle described within, thereby aiding continuity of information from one event to the next, regardless of what region in which a race takes place. A minimum of time and cooperation is required to properly fill in the pages which will result in a higher degree of race worthiness.

The below log book pages show the record of drivers who have done bailouts in this car.

Notes & Comments
<p>Line System - Helix 1301 & FE36 6/23/08 - PRESIDENTS RACE 172679 JIM MILLER 7/24/08 wire seal LIT FRONT TUBING CARB TO WHEELS WILLIAM MACMILLAN BAIL OUT OK STEVE DAVIES</p> <p>JOE MCARDITHY COMPLETE BAIL OUT DRILL ON 5.6.09.</p> <p>Doug Mac Millan Bail out OK 8-12-09</p> <p>Craig Corbin Bail out OK 8-12-09</p>

Record of Vehicle Ownership
Competition No. _____ Date Log Issued _____ Date of Construction _____ Manufacturer/Builder _____ Type of Vehicle _____ Original Owner _____ Major Modification for Class _____ Second Owner _____ Purchase Date _____ Major Modification for Class _____ Third Owner _____ Purchase Date _____ Major Modification for Class _____ Fourth Owner _____ Purchase Date _____ Major Modification for Class _____
Technical & Safety Information
Cars: Roll Bars & Cages Main Frame _____ Material _____ Main Hoop _____ Fore & Aft Bracing _____ Supplemental Bracing _____ Attachments _____
Motorcycles Main Frame Manufacturer _____ Material _____ Serial No. _____ Front Fork Assembly _____ Steering Damper _____ Chain Guard _____ Swing Arm Assembly _____ Kill Switch _____ Fuel Shut Off _____ Wheel & Tire Assembly: Front _____ Rear _____
Safety Equipment Cars & Motorcycles
Seat Belts Year Purchased _____ SEMA Tag No. _____ Width _____ No. of Connection Points _____ Fire System Brand _____ Type _____ Date Last Filled _____ Chute(s) No. of Chutes _____ Make _____ Wind Screen Material _____ Notes: _____ _____ _____

The above page shows the record of ownership and commonly used vehicle codes. The below page is a blank event record which must be filled in for each event or class change.

Event Record
Location: El Mirage <input type="checkbox"/> Bonneville <input type="checkbox"/> Muroc <input type="checkbox"/> Other <input type="checkbox"/> Event Date: _____ Competition No. _____ Engine Class _____ Body Category _____ Existing Record _____ Engine Make _____ No. of Cylinders _____ C.I.D. _____ Bore _____ Stroke _____ Normally Aspirated <input type="checkbox"/> Super Charged <input type="checkbox"/> Turbocharged <input type="checkbox"/> Gas <input type="checkbox"/> Fuel <input type="checkbox"/> Other <input type="checkbox"/> Body Classification: _____ Classification as inspected _____ Modifications done for class _____
Safety Inspection
Inspectors Signature _____ #1 Signature _____ Print Name _____ #2 Signature _____ Print Name _____ #3 Signature _____ Print Name _____ Driver No. 1: _____ Print Name _____ SCTA License No. _____ Class: _____ Yr. Issued _____ Driver No. 1: _____ Print Name _____ SCTA License No. _____ Class: _____ Yr. Issued _____ Driver No. 1: _____ Print Name _____ SCTA License No. _____ Class: _____ Yr. Issued _____
Reinspection Correction
Vehicle Representative Owner <input type="checkbox"/> Driver <input type="checkbox"/> Mechanic <input type="checkbox"/> Other <input type="checkbox"/> Signature _____ Print _____ Inspectors Comments _____ _____ _____ Inspectors Signature _____ Print Name _____
Event Results
Record: Yes <input type="checkbox"/> No <input type="checkbox"/> Speed: _____ Notes: _____ _____ _____