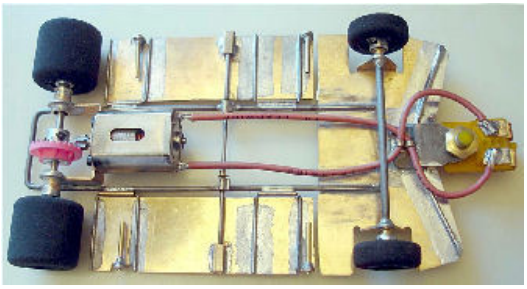
JK Spec



A. General Specifications

1. ***Maximum Overall Chassis Width*:** 3.125” (79.38mm), measured across any part of the chassis, as well as across the front and rear axles).
2. ***Maximum Body Width:*** 3.250” (82.55mm), measured at the front and rear wheel arches.
3. ***Maximum Rear Tire Width*:** 0.810” (20.57mm).
4. ***Minimum Rear Tire Diameter:*** 0.8125” (20.64mm).
5. ***Minimum Front Tire Width:*** 0.225” (5.72mm). Wheels with O-ring ‘tires” are prohibited. The front tire contact patch must touch the track across the full width of the tire (i.e. no coning/angling or knife-edging is allowed). Tire edges may be rounded to a maximum 1/16" radius.
6. ***Minimum Front Tire Diameter:*** 0.750” (19.05mm).
7. ***Minimum Rear Chassis Clearance:*** 0.050” (1.27mm). The entire motor bracket, rear chassis section, and gear must meet this clearance. Clearance will be measured with front and rear tires sitting flat on the test block without the guide.
8. ***Minimum Front Chassis Clearance:*** 0.015” (0.38mm), measured at the most forward part of the chassis. Clearance will be measured with front and rear tires sitting flat on the test block without the guide.
9. **Axles (Front & Rear):** 3/32” (2.38mm) minimum diameter, one-piece, solid steel.

   9a. Hollow axles are not allowed.

   9b. Axles may only be flattened in the areas where the wheels and gear are secured.
10. ***Bushings/Bearings*:** Oilite/bronze bushings are to be used in the rear.
11. ***Minimum Weight:*** 110 grams ready to race.
12. ***Drive Type:*** Inline drive only, with the motor shaft at 90° to the rear axle.

    12a. The armature shaft of the motor must be located on the longitudinal center line of the chassis, i.e. offset motors are not permitted.
13. ***Drive Gears*:** Only 48 pitch production gears are allowed. The only modification allowed is the addition of a 1/8" reducing sleeve for use with a 3/32" axle.
14. ***Maximum Front Axle Play*:** 0.125” (3.18mm), as part of the maximum front track width. At no time can tires extend out past the body.
15. ***Maximum Rear Body Height:*** 1.375” (34.93mm) measured with the car on all four wheels on a tech block (unsupported by the guide flag), from the tech block surface to the top of the highest point of the rear of the body, excluding any add-on spoiler.

    15a. Severe raking of the body for aerodynamic effect is not allowed.
16. All chassis parts, including the guide flag, must be covered by the unmodified body.
17. The wheels shall be located in relation to the wheel arches in the body.
18. ***Tires – Rear:*** Any commercially-available black natural rubber tire, chemically-treated or untreated, on any size hub.

    18a. Speed Rubber is prohibited.

18b. Tires may not be changed during a race. Should a racer encounter a damaged tire/wheel (stripped screw, bent hub or chunked tire), the racer will be afforded the opportunity to make the repair under the green and present the car to the tech inspector at the end of the heat for checking before the racer will be allowed to continue.

18c. For those races where there is a move-up from one main to another, tires can be changed and the car will go through a full tech inspection.

18d. Those racers making a move-up from one main to another and not choosing to change tires will still be subject to tech inspection for legal tire diameter and clearance.

2. ***Tires – Front:*** Must be made of two pieces, i.e. a wheel and a tire.

19a. Front wheels may be made of any material and can have any size hub (as long as the front wheel and tire dimensions listed elsewhere in these rules are observed).

19b. Front tires must be glued to the wheels and be made of black rubber; only SBR, Wonder, and natural rubber type materials are acceptable.

19c. Front tires may be coated with cyanoacrylate adhesive (“Super Glue”) or nail polish.

Chassis

1. ***Chassis:*** Must use JK Retro Chassis Kit. Either available bracket (non-hypoid and hypoid) may be used, as well as either available main rail diameter (.063” or .078”).

2. ***Chassis Construction:*** The JK chassis can only be constructed and modified as described in this section.
2a. The chassis must be constructed as a monorail, i.e. one main rail per side.
2b. Motor bracket brace wires that are soldered to the main rails may not extend forward more than 1" per side from the motor mounting face of the bracket.
2c. Braces for cross bars or bite bars may not have sections soldered to (or parallel to) the main rails longer than 1/4"per side.
2d. The nose piece may be cut from the pans and the pans trimmed at the rear to accommodate the desired wheelbase.
2e. The chassis may be built with or without floppy pans.
2f. If floppy pans are used, they must be one piece (not narrowed or sectioned) per side and the hinges must be attached directly to the main chassis rails.
2g. Plumber hinges are not allowed.
2h. If the side pans are not separated from the nose piece, the rear of the pans may flex vertically.
2i. The pans and the nosepiece may not be lightened, i.e. trimming, thinning, and/or adding holes or cut-outs to these components to lighten them is not allowed.
2j. The rearmost edge of the side pans may be trimmed for tire clearance but must remain square with the sides (i.e. no anglecutting) and no more than 1/4 (.250) inch of the pan's length may be removed.
2k.The main rail may be trimmed only to fit the motor bracket and/or to adjust the chassis wheelbase.
2l..The motor bracket must be used as-is, in unaltered shape and form, but minimal trimming or notching to facilitate chassis assembly or to accommodate bracing is permitted.
2m. The motor bracket must support the motor and the axle tube must pass through the motor bracket.
2n. The motor may be screwed to the motor bracket and/or may be soldered in place.
2o. The front axle uprights must be retained but may be opened to accommodate an axle tube or collars.
2p. Pin tubes, if used, must be brass, must be mounted in the designated locations on the frame, and must be fixed, i.e. floating pin tubes are not allowed. Body clips are allowed.
2q. Additional piano wire bracing for strengthening purposes may be used on the nose piece, front wings, and rear bracket.
2r. A commercially-available guide reinforcement piece may be used but the guide hole may not be moved or modified.
2s. Main chassis rails constructed of round steel or brass wire maybe ground or sanded flat on the bottom, but no more than 20% of the rail diameter may be removed.
2t. Wire or tubing rails must connect the front and rear sections of the chassis. Using metal strip for this purpose is not permitted. A rail is defined as that which connects the motor bracket to the front of the chassis.

3. ***Drive Type:*** Inline drive only, with the motor shaft at 90° to the rear axle.

12a. The armature shaft of the motor must be located on the longitudinal center line of the chassis, i.e. offset motors are not permitted.

4. ***Front axle:*** A single straight, 3/32" (2.38mm) minimum diameter, one-piece front axle is required, carrying both front wheels. The axle may be fixed or in a tube. NO hinged front wheel movements are allowed (i.e. no "L" arms). Front wheels may rotate independently.
5. ***Guide:*** A single guide flag is allowed, centered on the longitudinal axis of the chassis (i.e. no sideways "free float" or offset) and with a blade no larger than .086" (2.20mm) wide x 1.060" (27.18mm) long.
6. ***Tape/Lead:*** Lead weight may be added to a chassis but may only be affixed to the top side of the chassis. Strapping or other tape to control or restrict movements is allowed but may only be affixed to the top side of the chassis.
7. No part of the chassis, motor, gear, or other component may hang below the main chassis rail(s), which may not be bent or bowed vertically for the purpose of lowering the midsection of the frame below the level dictated by the clearance specifications.

C. Motor

1. ***Motor types*****:** May use any one of the following motors, which must remain unopened and unmodified.

- **Falcon 7**

2. At designated large IRRA scheduled races, the track owner may elect to utilize a hand-out motor system, using one of the approved motors. This will be announced well in advance and ample time will be allowed on the day of the race for the racer to obtain the motor and install it. If a race for this class is conducted using handout motors then the racer must use the motor(s) assigned to him/her.
3. ***Note:*** No other motors will be allowed unless approved by the IRRA and added to the approved motor list.
4. ***Exclusion Clause:*** Clear violation of the motor-tampering rule will result in permanent exclusion from future IRRA events of any kind.

   4a. Racers will be required to sign a tech sheet giving permission for the Race Director, at his discretion, to tear their motors down for inspection to prove legality.

   4b. If a motor is deemed illegal due to unapproved modifications (including, but not limited to, incorrect armature, bushing alterations, magnet shimming, magnet change, timed brush hoods, etc.), the racer will be disqualified from the event and future events until reinstated by IRRA officials.

   4c. Non-refurbishable motors found legal will be replaced at no cost to the racer.
5. A motor may not be changed after tech inspection or during a race except as follows:

   5a. For those races where there is a move-up from one main to another, motors can be changed and the car will go through a full tech inspection.

Body

1. The following JK bodies are the only bodies approved for use in this sponsored class:
   - JK 7086B (Ferrari 612),
   - JK 7087B (McLaren M6)
   - JK 7081B (Ti22)

   1a. Bodies may not be any less than .007" thick on the sides. Any body found to be flimsy or a detriment to marshaling will need to be corrected by the racer. Tape or body armor may be used to achieve the desired side thickness.
2. ***Body style:*** Racers are encouraged to present cars with scale realism. Bodies must be those shown above.

   2a. No "flattened" or "aerodynamically-improved" bodies allowed (i.e. no molded-in spoilers, wings, etc., that were not on the original full-size car or original mold). Note: molded-in spoilers may not exceed the allowed specification governing the maximum width of the body.

   2b. Front wheel arches must be cut out. Rear wheel arches may be left closed if the original full-size car ran with closed wheel arches.

   2c. Bodies must be presentably-painted and carry at least three racing numbers, one on each side, and one on the front. To further clarify this regulation, all bodies must be fully opaque on all sides except for those areas deemed to be windows. Windows may be tinted. The term opaque means covered by paint, tape, or other suitable material such that a finger is not visible through the paint or other covering under normal lighting.

   2d. No part of the chassis may be seen when looking down on the car from above. Legal openings, such as air vents, etc., may be cut out.

   2e. There should be a minimum 1/16" (1.59mm) vertical component and/or part of the grill along the front edge of the body unless this element was not on the original car (example: Ti22).

3. ***Spoilers and Air Control:*** A single, flat plastic spoiler set at any angle may be added to the rear of the body only.

   3a. The spoiler's length is limited to a maximum of 1/2" (12.7mm) from the rear edge of the body and must be no wider than the outer edges of the body.

   3b. No additional bends are allowed except for the one used to set the initial angle.

   3c. No side dams of any type are allowed.

   3d. Front diaplanes are not allowed.

   3e. High-mounted wings are allowed if they are used on the original full-size car. Such wings must be securely attached to the body and/or chassis.

4. ***Cockpit:*** All bodies must carry a painted (at least two colors), fully-molded three-dimensional interior comprising a driver (helmet, shoulders, and arms), a steering wheel, and cockpit representation.

   4a.Interiors must be presentably painted and realistically detailed

   4b. No paper interiors.

   4c. The body must be totally cut out so the interior is in full view.