



Another chapter in M.M. history is begun with this...

FORMULA 1 RACING CAR

Built by B.N.Love from a new No.3 Set, it serves as our first ever 1978 Meccano system offering.

Making its debut in the new series of Meccano Sets is the special Road Wheel, Part No. 187c, which lends itself so well to the concept of a modern racing car that Bert Love decided to see if the new No. 3 Meccano Set could provide the parts for a finished model. It could, as Bert proves with this excellent design for a Formula 1 Racing Car!

Construction is completed in two sections: the chassis with power unit, and the detachable bodywork. A $5\frac{1}{2}'' \times 2\frac{1}{2}''$ Flat Plate 1 is used for the chassis base, this being extended with overlays of two $7\frac{1}{2}''$ Strips 2 projecting to the rear with an overhang of five holes to provide a simple pair of rear cantilever leaf springs for the back axle. A pair of $5\frac{1}{2}''$ Strips 3, reinforced on top by $3\frac{1}{2}''$ Double Angle Strips, are set in by two holes on the forward edge of the base-plate. These Strips run forward to give a sprung leading section to the chassis and they hold a $2\frac{1}{2}''$ fixed Double Angle Strip 4 forming the front axle of the model.

At the rear end of the base plate, four $\frac{1}{2}''$ Bolts are set in with lock-nuts and the motor is mounted as shown, using paired Nuts on each bolt shank to adjust the motor for optimum height when engaging the intermediate gear

shaft. The driver's seat is made from a $2\frac{1}{2}'' \times 1\frac{1}{2}''$ yellow Plastic Plate, curved to press against the motor casing and bolted to a Channel Bearing 5 in the position shown. Rear Axle journals are now fitted by bolting on $1\frac{1}{2}''$ Angle Girders to the overhung $7\frac{1}{2}''$ Strips 2. The 'nearside' Girder is fitted with its round hole flange pointing outwards while the other Girder has its flange pointing inwards, this arrangement permitting the use of the $2\frac{1}{2}''$ Axle Rod in the No. 3 Set for the purpose of an intermediate gear shaft.

A $1\frac{1}{2}'' \times 1\frac{1}{2}''$ Flat Plate 6 is bolted to the slotted flange of each $1\frac{1}{2}''$ Girder, due clearance being allowed for the main rear axle — a $4''$ Rod — to which the rear Road Wheels are attached. Two Plastic Pulleys act as smooth spacing washers for the 'nearside'

Road Wheel. Mounted on the rear axle is a 57-teeth Gear Wheel 7, boss inwards, its face just clearing the inside edge of the $7\frac{1}{2}''$ Strip 2.

Setting up the intermediate gear shaft requires a certain amount of care and patience. A $2\frac{1}{2}''$ Rod rides in the top centre holes of the $1\frac{1}{2}'' \times 1\frac{1}{2}''$ Flat Plates and carried on this Rod are, starting inside the 'nearside' Plates, three Washers, a Multi-purpose Gear Wheel 8, a $\frac{1}{2}''$ Pinion 9, boss outwards, followed by an adjacent Spring Clip plus one Washer. Before assembling this shaft, the second Multi-purpose Gear Wheel 10 must be fitted, boss outwards, onto the drive shaft of the motor. The two Multi-purpose Gears are set to mesh smoothly at right angles to each other, the motor height being adjusted as necessary by the paired Nuts on the bolt shanks. When satisfied, the $\frac{1}{2}''$ Pinion is set to hold the Rod in place between the $1\frac{1}{2}''$ Flat Plates and this should place the Pinion in clean mesh with 57-teeth Gear 7.

At this stage it is useful to connect up a Battery Box and leads to the motor to try a 'dry' run while holding the chassis off the

ground. Re-adjustments should be made for any tightness, and the metal Gears and Rods should be lubricated with the slightest touch of fine oil.

The ends of $7\frac{1}{2}$ " Strips 2 are now reinforced by bolting a $2\frac{1}{2}$ " x $\frac{1}{2}$ " Double Angle Strip between their rear ends. The front wheels are mounted in place on $1\frac{1}{8}$ " Bolts which are then lock-nutted to Double Angle Strip 4 forming the front axle. (To all intents and purposes, we now already have one completed model - a Dragster!). At this stage, the model may be put through its motorised trials, all axles and bearings being adjusted for optimum performance.

Having passed its trial, the Dragster can be turned into the Formula 1 Racing Car by the addition of the sleek body shell. Each side of the bodywork is provided by a $5\frac{1}{2}$ " Angle Girder to which is bolted a $5\frac{1}{2}$ " x $1\frac{1}{2}$ " Flexible Plate 11, the lower edge of which is overlaid by a $5\frac{1}{2}$ " Strip. The side is extended forward by a Flat Trunnion 12 and extended rearwards by a $1\frac{1}{2}$ " Corner Bracket 13. A $3\frac{1}{2}$ " x $2\frac{1}{2}$ " Flexible Plate 14 forms the main top section just forward of the cockpit, and the $5\frac{1}{2}$ " Angle Girders at the sides are bolted direct to the centre holes of this Plate and are then splayed rearwards to be fixed to the back central slotted hole of the Flexible Plate by a pair of $2\frac{1}{2}$ " Stepped Curved Strips 15. Forward extension of the body top is made by a $2\frac{1}{2}$ " x $1\frac{1}{2}$ " Flanged Plate 16 bolted underneath the $3\frac{1}{2}$ " Flexible Plate and extended three holes by

a $2\frac{1}{2}$ " x $1\frac{1}{2}$ " Plastic Plate 17. A pair of 3" Narrow Strips give taper continuity between Plates 16 and 17 as shown in our overall view of the model. A $2\frac{1}{2}$ " x $1\frac{1}{2}$ " Transparent Plastic Plate is attached to the junction of the $2\frac{1}{2}$ " Stepped Curved Strips by an Obtuse Angle Bracket to form the windshield.

Finishing touches are provided by front and rear aerofoils and an engine cowling with anti-roll protection. A pair of 2" Strips 18 rise from the rear of the chassis, the upper ends of these being connected by a $2\frac{1}{2}$ " x $\frac{1}{2}$ " Double Angle Strip, to which a $3\frac{1}{2}$ " x $2\frac{1}{2}$ " Flanged Plate 19 is bolted through its centre row of holes to serve as the rear aerofoil. Another Double Angle Strip holds the leading edge of the foil and secures it to horizontal $4\frac{1}{2}$ " Narrow Strips 20 at each side of the motor. These Narrow Strips also support the anti-roll engine cowling which is made from two $2\frac{1}{2}$ " x $2\frac{1}{2}$ " Plastic Plates 21 reinforced by a pair of $3\frac{1}{2}$ " Narrow Strips formed into a gentle curve.

The body section is attached to the chassis by means of six standard Nuts and Bolts. Two $1\frac{1}{2}$ " x $\frac{1}{2}$ " Angle Brackets are bolted to the rear corner holes of the chassis baseplate, while $1\frac{1}{2}$ " x $\frac{1}{2}$ " Double Angle Strips are bolted to the front. The side plates are then bolted to these parts. The curvature shown in our general view is set into the forward Plastic Plate of the bodywork and then the front aerofoil is fixed in place. This aerofoil is made from a pair of $2\frac{1}{2}$ " Flat Girders 22 secured by means of a

$2\frac{1}{2}$ " Stepped Curved Strip which is bolted through to the forward ends of the $5\frac{1}{2}$ " chassis Strips 3 below.

Adequate self-adhesive stickers are available in the Set to provide suitable decoration in order to add the finishing touches to the model. It will be noticed that our Car carries the Number "9" on each side and this was achieved by using the figure "9" from the sticker sheet on one side and the figure "6", inverted, on the other side!

PARTS REQUIRED

2 - 1b	2 - 23	1 - 51	2 - 133a
4 - 2	1 - 26	1 - 53	1 - 160
2 - 6	1 - 27a	1 - 70	4 - 187c
2 - 9	2 - 27f	2 - 74	2 - 189
2 - 9f	1 - 35	4 - 90a	1 - 190a
2 - 12	110 - 37b	2 - 103f	1 - 193
2 - 12b	130 - 37c	4 - 111a	2 - 194
1 - 12c	50 - 38	2 - 111d	2 - 194a
1 - 15b	4 - 48a	1 - 125	2 - 235a
1 - 16b	2 - 48b	2 - 126a	2 - 235b
			2 - 235d

