



Photo Lebrayne

MADE FOR AND GUARANTEED BY

CIRCUIT
24

MECCANO LTD

LE MANS IN MINIATURE



... CIRCUIT 24

This book is to help you know your set, because properly used and maintained it can give you years of pleasure. It can bring into your homes the magic of the World's greatest Grand Prix Circuits.

There is a feeling of intense excitement as the cars speed round the track and the exhaust roar fills the air. There is sheer reliability in the way that the cars tear on, lap after lap as regular as clockwork, until the winner crosses the finishing line or—after the slightest lapse of concentration—the car spins off at a bend. No doubt about it—the cars are all winners, but it is the skill of the driver that determines the individual race.

THESE EXCLUSIVE FEATURES ARE NOW YOURS

- * Unbreakable Cars
- * Excellent track and track locking
- * No brush replacements
- * High grade long life 'pick-ups'
- * Extremely robust A.C. motor
- * Matching track and tyre surfaces for fast get-aways
- * Free wheel when power is cut
- * Supercharge boost effect
- * High scale speed
- * Exciting and realistic exhaust roar
- * Rectifier not needed in power units
- * Ease of maintenance



LAYING THE TRACK

The first important point to ensure a trouble-free race is to lay the track carefully and on as level a surface as possible.

When assembling the track for the first time you may experience a little difficulty but this will soon be overcome as you become more experienced.

First choose your layout from the suggestions in this book, or devise one of your own, and then proceed as follows:—

Fig. 1 Place two pieces of track at an angle one to the other, so that the notches A are directly beneath the protruding portions B.

Fig. 2 Place the protruding portions into the notches.

Fig. 3 Press down firmly with your thumbs and a very sharp snap will be heard as they are securely joined.

Continue until you complete your circuit.

All track components (straights, curves, bridges, chicanes etc.) are joined in the same way.

When the track has been laid it is advisable to wipe it with a dry cloth as dust is the main cause of bad electrical contact.

Occasionally wipe the track conductors with a slightly oily rag. This will greatly increase the life of your pickups.

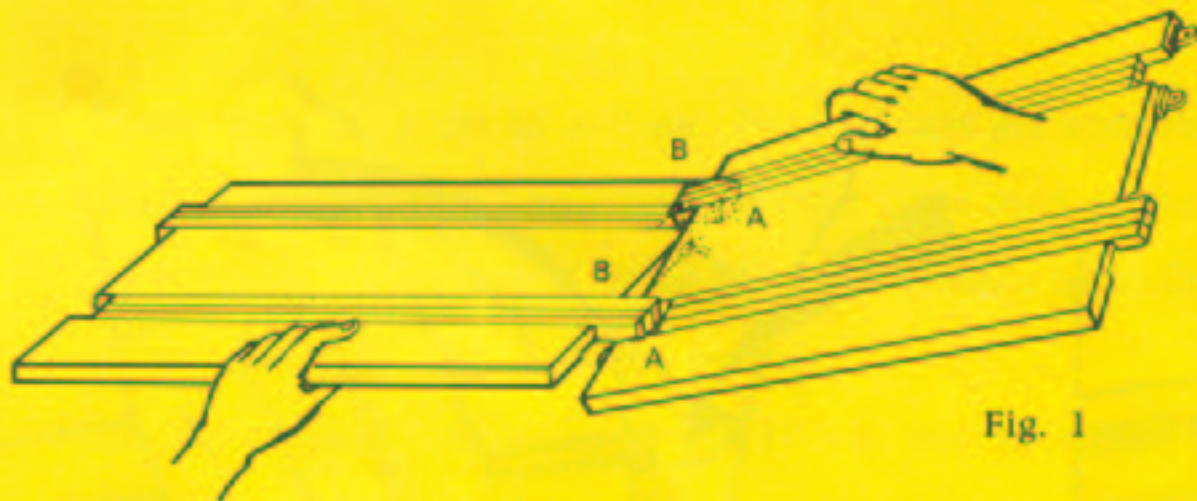


Fig. 1

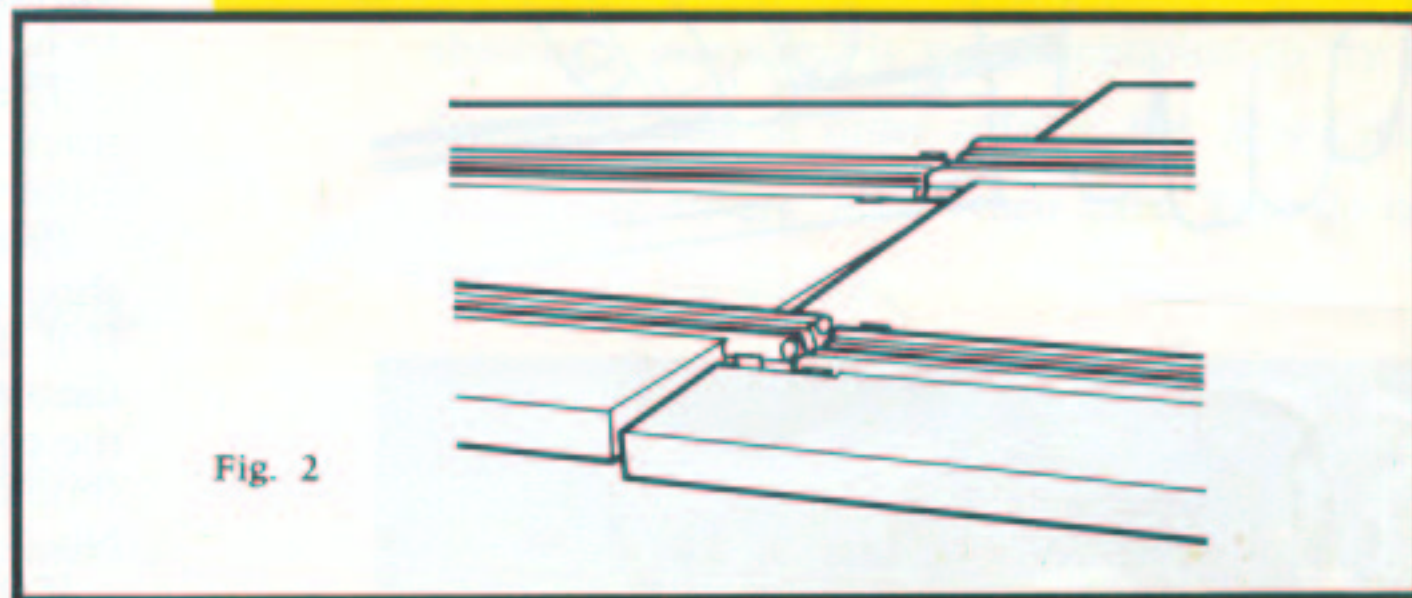


Fig. 2

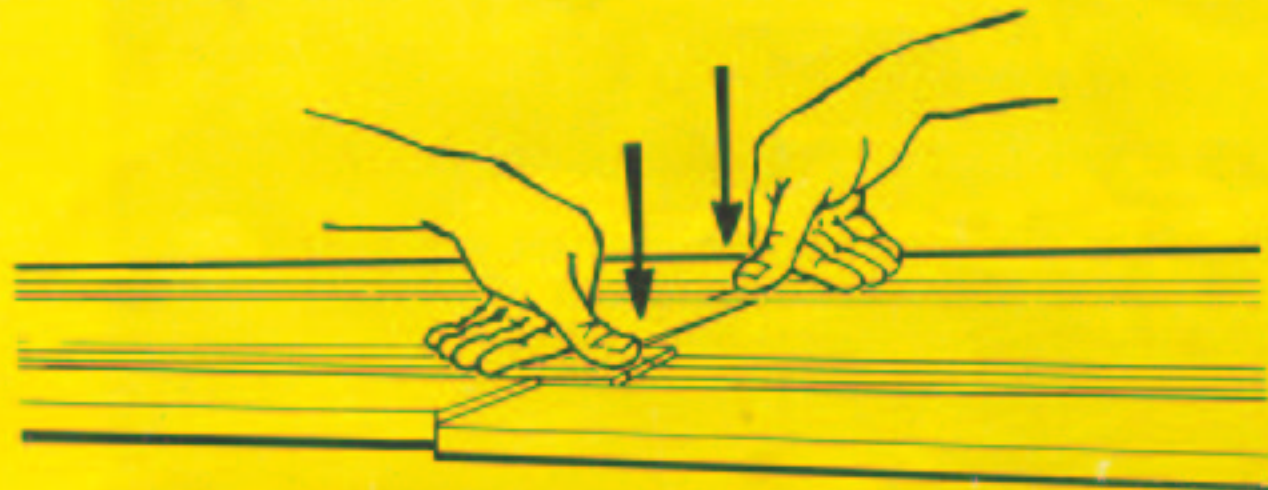


Fig. 3

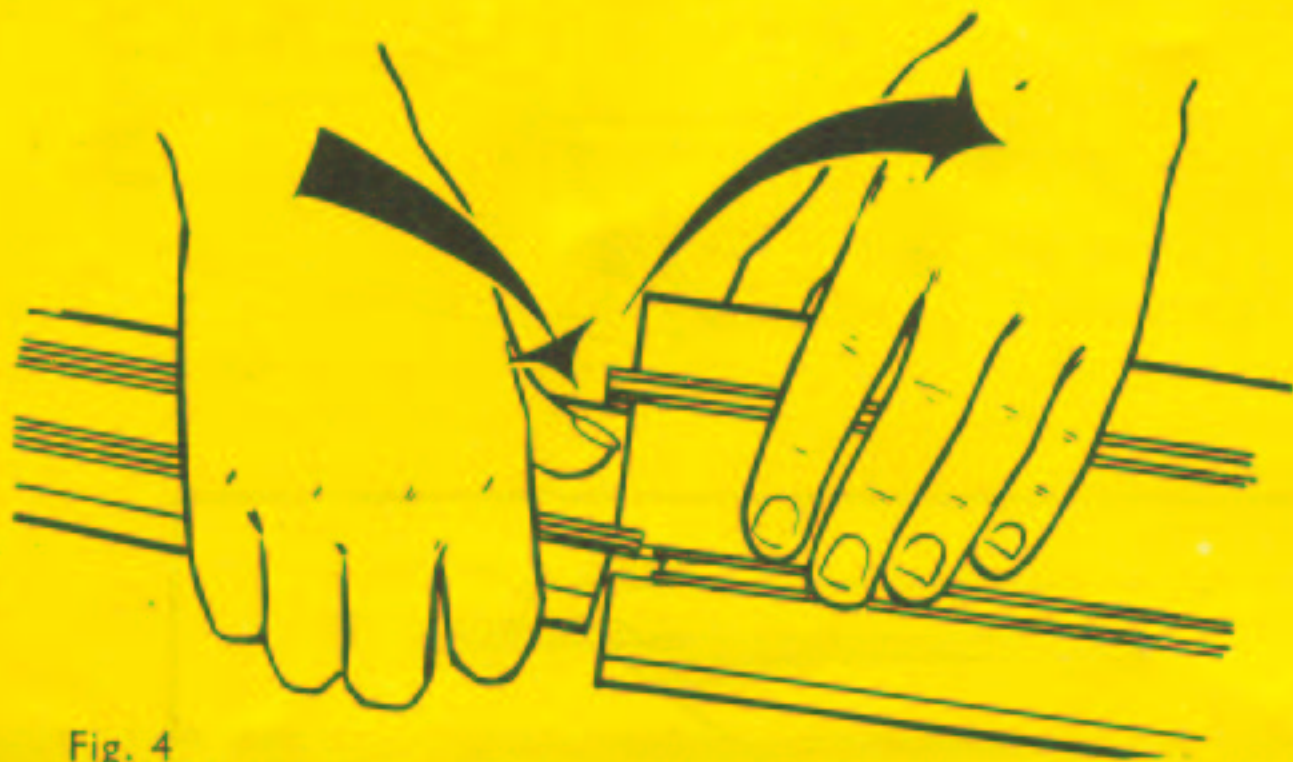


Fig. 4

When you disconnect your layout, two pieces of track should be lifted slightly and twisted in opposing directions so that the protruding portions come out of the notches. (see Fig. 4)

CONNECTING THE CIRCUIT 24 POWER UNIT

One of the pieces of track in your set will have a small hump and a triple wire coming out of the side. This is called the Straight with Hump and is designated on all the layout drawings by the letters S.H. This Straight with Hump connects with the Power Unit.

The two accelerators are already assembled to the Power Unit at one end and at the opposite end will be found five holes (see Fig. 5).

When the triple wire leading from the Straight with Hump is held flat it will be seen that there are three wires side by side, each ending in a connection. The two outer wires connect to the two outer holes on the Power Unit.

The three inner holes on the Power Unit are numbered 1, 2 and 3 and the central wire is connected to hole No. 2.

The time has now come to place the cars on the track. They can face either way as they will race in either direction.

Press one accelerator lightly. The corresponding car should move slowly forward.

If it shoots forward then the voltage is too high and the central connection should be made in hole No. 3.

If, on the other hand, the car only moves slowly when the accelerator is nearly fully depressed, then the central connection must be moved to hole No. 1.

(These three connections enable you to adapt your game to local voltage variations.)



Fig. 5

THE CARS

The engines of your miniature racing cars are extraordinarily powerful for their size, which is why they give such phenomenal acceleration.

They work from A.C. current—and the motors are of the vibrator type. This provides two main advantages—very little maintenance and the realistic exhaust roar which is such a feature of this game.

After 100 hours of running, your vibrating blade has struck the ratchets on the rear axle no less than 36,000,000 times. So materials of the highest quality have to be used—materials that can stand up to exacting requirements—materials that have been used in the making of space rockets (high tensile molybdenum and stainless steels, Delrin, high impact nylon etc.)

ADVICE ON SPEEDING

The best advice is to treat your car as if it were a real one:— Follow the maintenance instructions scrupulously (see Page 6).

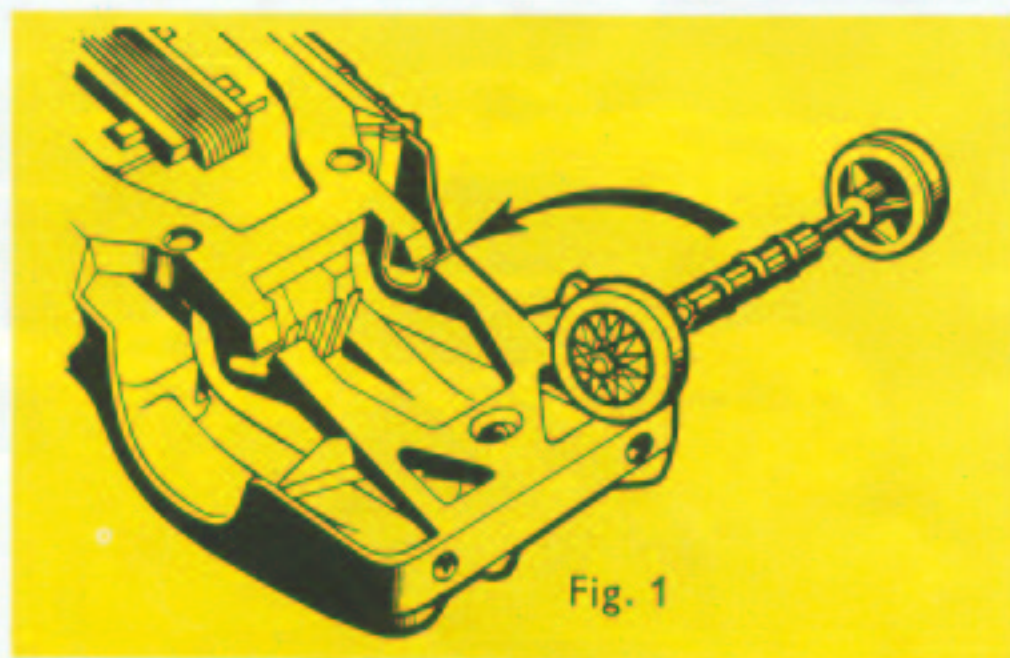
Never lend your car to anyone. No two cars are completely alike—only you will know how to treat your own properly. As with real racing cars, 'Circuit 24' cars are made to go fast—do not let them 'idle' for long periods.

Do not connect the Straight with Hump into hole No. 1 on the Power Unit unless the current variation makes it absolutely necessary. It is a temptation to try and go as fast as possible in order to win, but it is a mistake. The best racing drivers 'nurse' their cars. They do not want to wear it out too quickly.



MAINTENANCE OF YOUR CAR

1. At the end of every two hours running, oil the ratchets and bearings of the rear axle with a molybdenum disulphide oil or grease.
2. To replace worn tyres simply pull sideways by the rim to dislodge them and assemble new tyres.



3. Pick-ups are held by screws on some cars and when worn, can be exchanged easily by unscrewing and replacing with fresh pick-ups.

On other cars the pick-ups are a push fit and when worn are removed by gripping them and pulling upwards to free them from the locating pin and then pulling towards the rear of the car. New ones are inserted by pushing them towards the front until the locating pin is engaged.

During the excitement of racing, your car is very liable to spin off and crash. After such an accident it is quite likely that the pick-ups will be distorted and they are the only fragile part of the car. Except in extreme cases, they can quite easily be straightened again.

When straightening the pick-ups, note that they should be parallel, and clear of the guide pin.

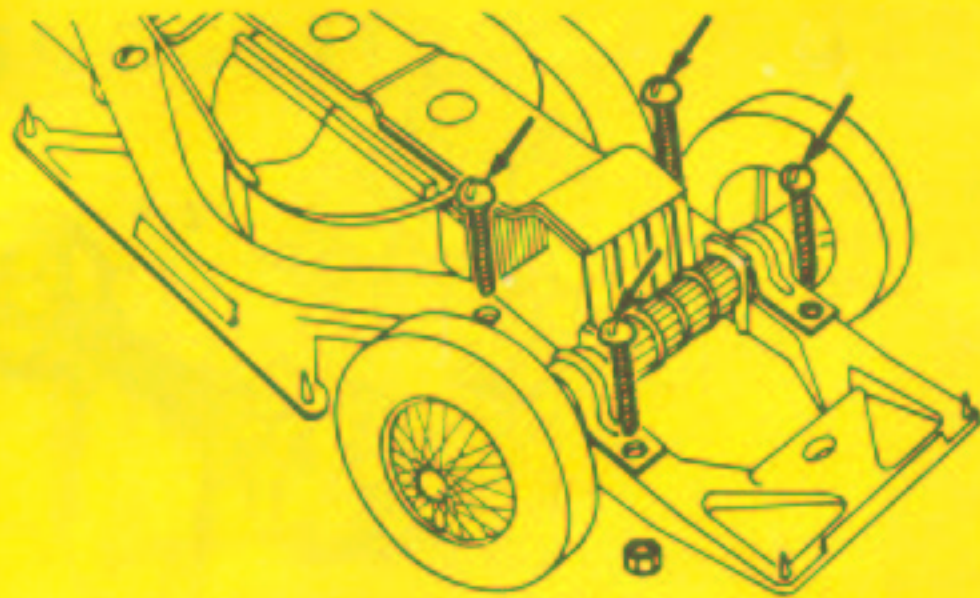


Fig. 2

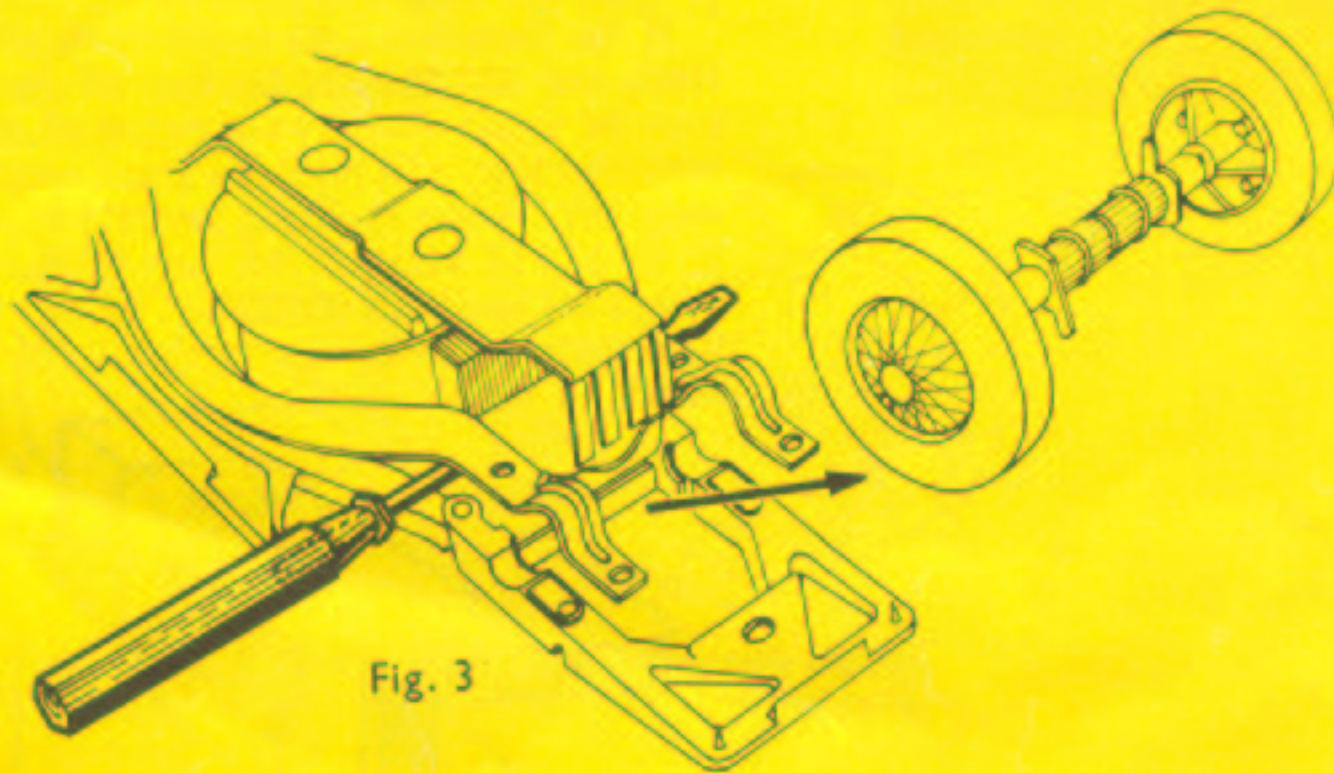


Fig. 3

4. The rear axle should not need changing until the cars have run about 20,000 average laps. When you turn your car upside down, you will find that the rear axles are held in one of two ways.

On some cars the bearings are held by four screws. To extract the rear axle it is necessary to unscrew and remove these four screws. Then a screwdriver must be put between the metal and plastic chassis and the two sections of the chassis must be eased apart so that the worn axle can be taken out. The new axle is placed in position with the guiding tags as shown in Fig 6. (The left rear wheel has a red spot.) Now remove the screwdriver and press the plastic chassis against the metal one. Replace screws.

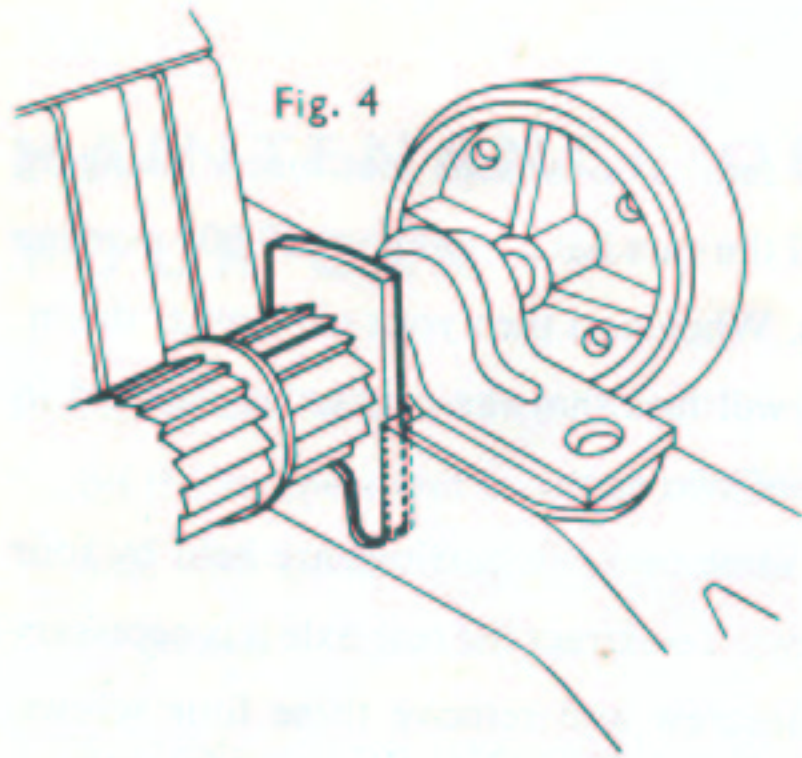


Fig. 4

On other cars, however, the worn axle can be removed by holding the car upside down in one hand and pulling the axle first towards the rear and then upwards as in Fig. 1. The new axle can then be pushed into place.

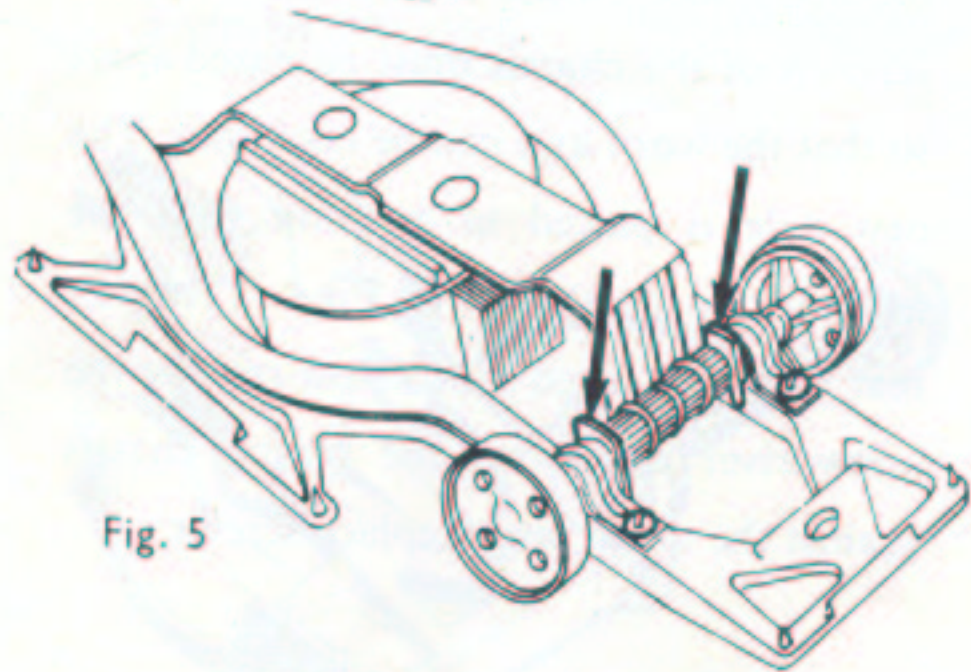


Fig. 5

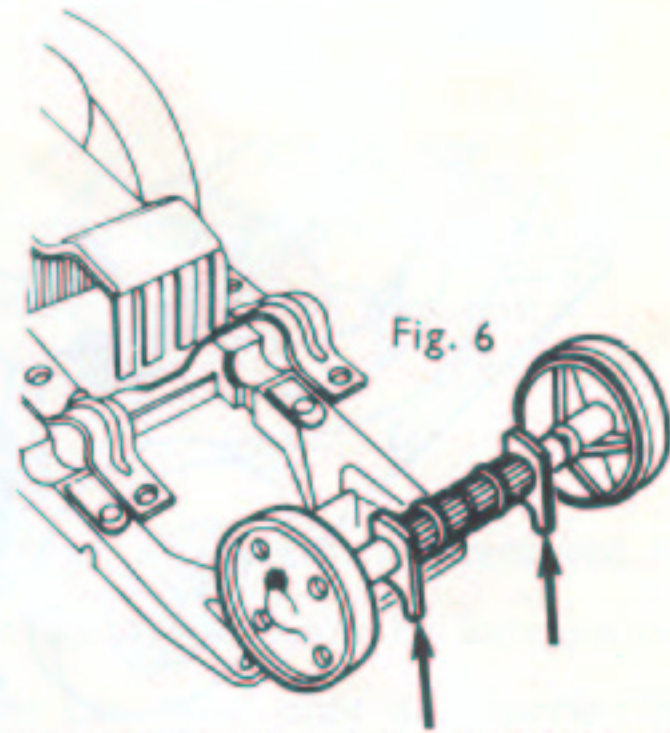
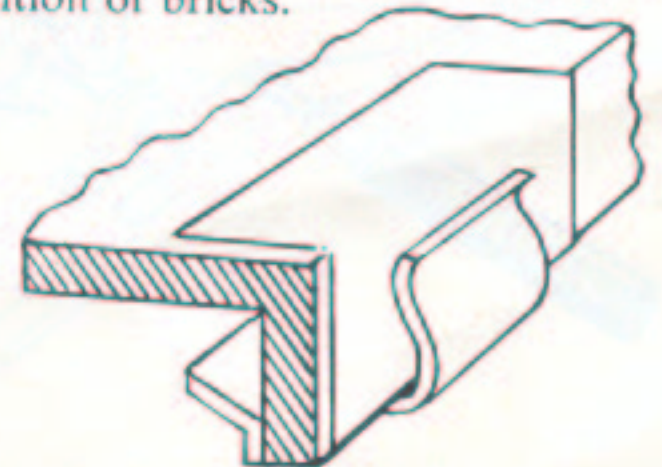


Fig. 6

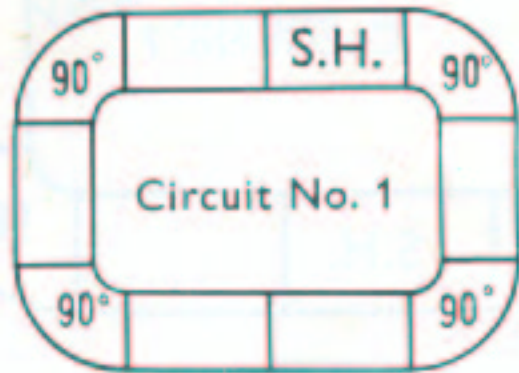
CLIP FOR CRASH FENCING

When fitted to the edge of the track this clip holds the Crash Fencing in position (3 clips per length is advisable).

If the moulded lugs at the ends of the track are accidentally broken off the clip may be fitted where two pieces of track join and they will hold the track sections together. When building layouts Nos. 4, 7, 9, 12, 14 and 17 the use of 4 clips where the single straight joins the flyovers will support the bridge without the addition of bricks.

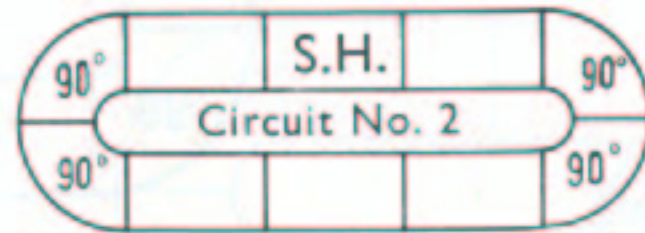


SUGGESTED LAYOUTS

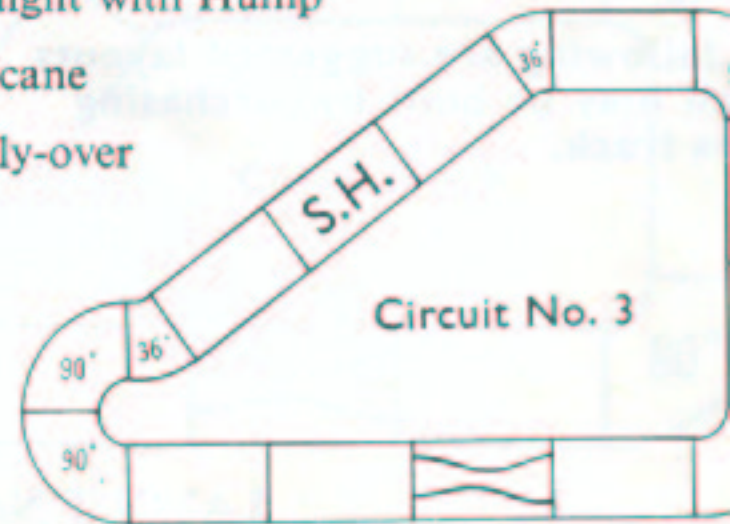
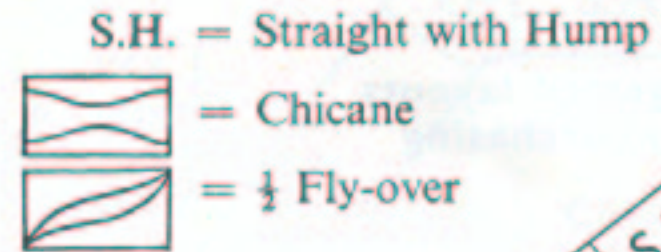


R SET No. 1 : 5 straights, 1 straight with hump, 4 internal 90° curves, 3' 6" × 2' 6".

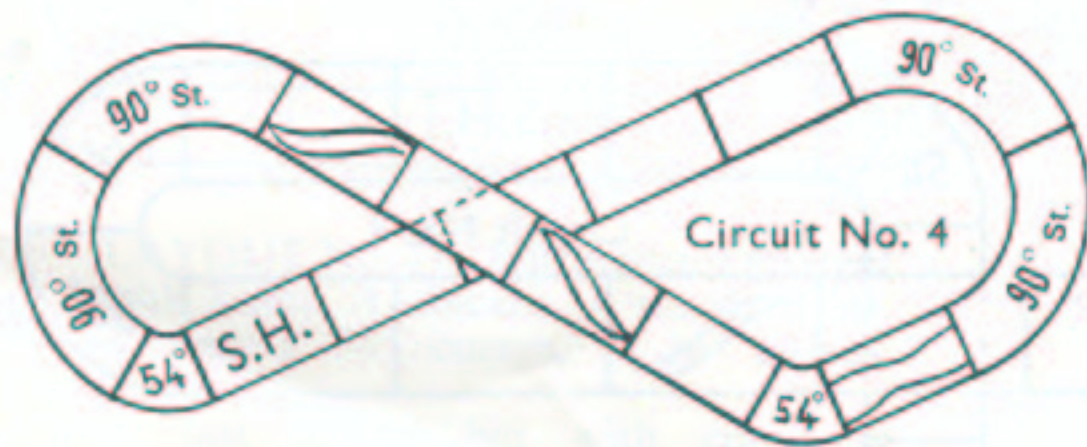
After each layout the approximate overall size is given.



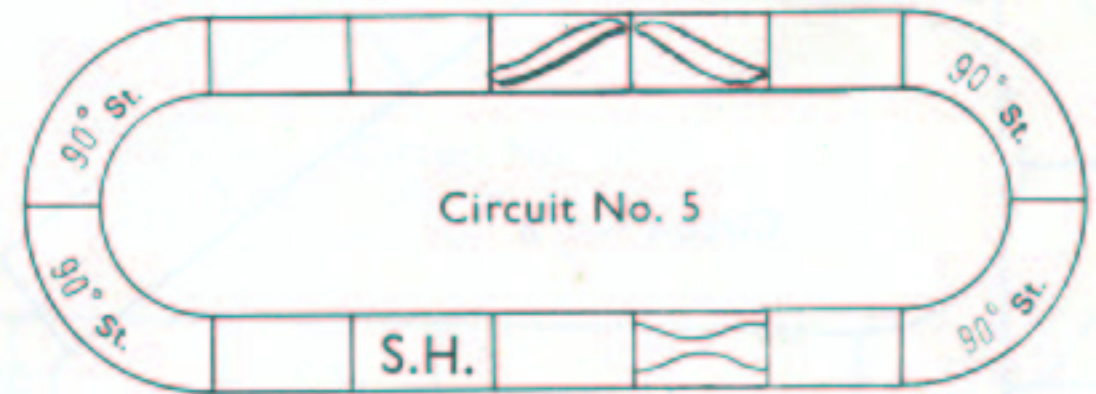
R SET No. 2 : 5 straights, 1 straight with hump, 4 internal 90° curves, 4' × 1' 6".
These two sets are ideal for beginners.



S SET No. 3 : 8 straights, 1 straight with hump, 4 internal 90° curves, 2 36° curves, 3' 6" × 5'.



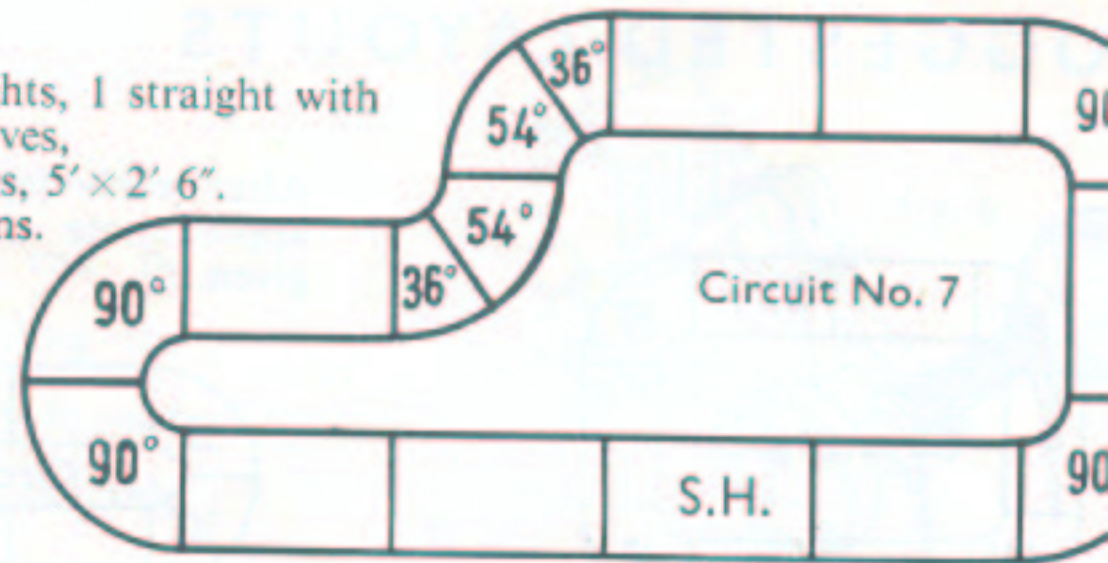
T SET No. 4 : 6 straights, 1 straight with hump, 1 chicane, 4 standard 90° curves, 2 54° curves, 1 fly-over, 7' × 3'.



T SET No. 5 : 6 straights, 1 straight with hump, 1 chicane, 4 standard 90° curves, 1 fly-over, 7' × 2' 6".

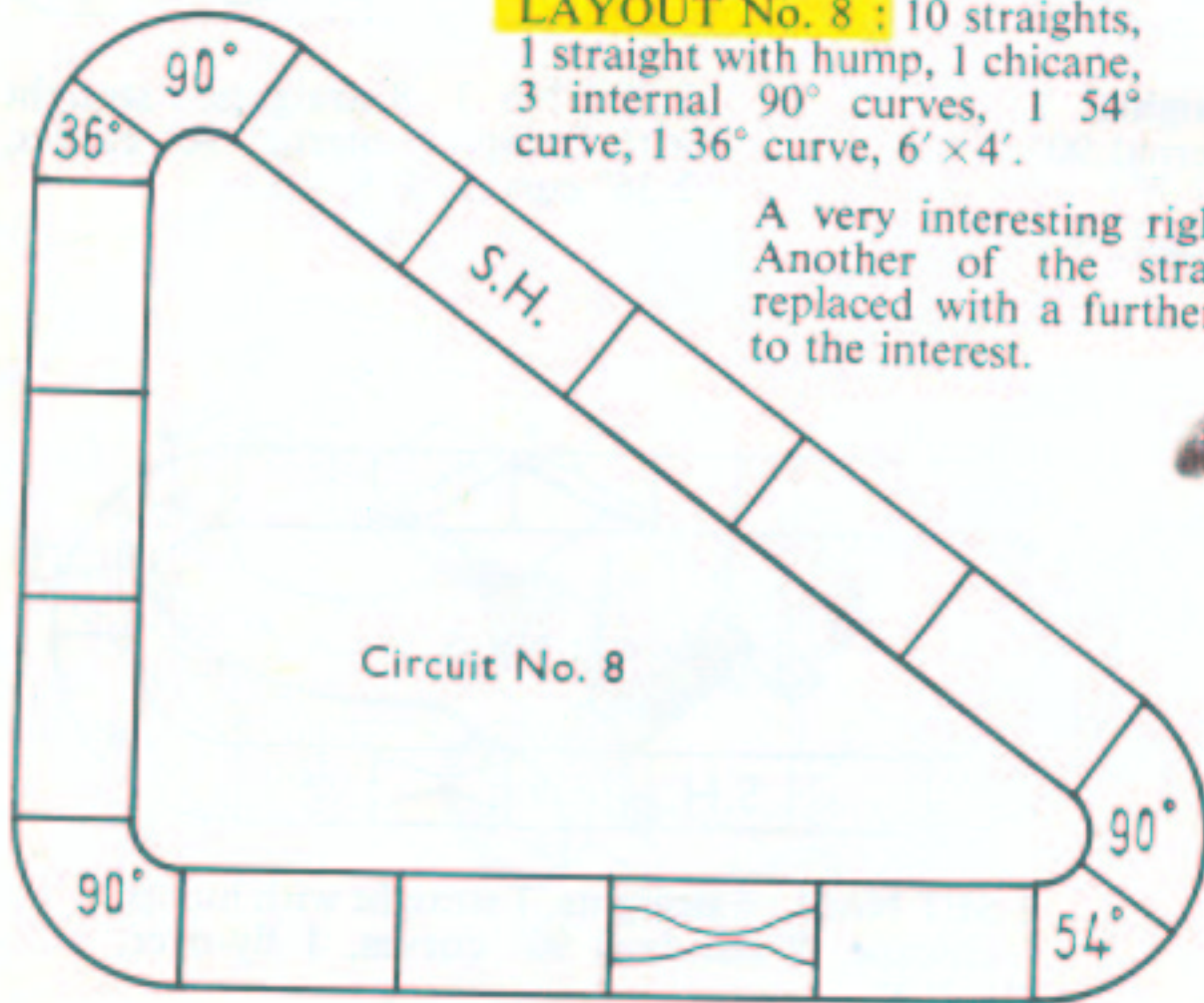
The following are suggested layouts which may be built by purchasing extra track.

LAYOUT No. 7 : 7 straights, 1 straight with hump, 4 internal 90° curves, 2 54° curves, 2 36° curves, 5' × 2' 6". A high number of tight turns.

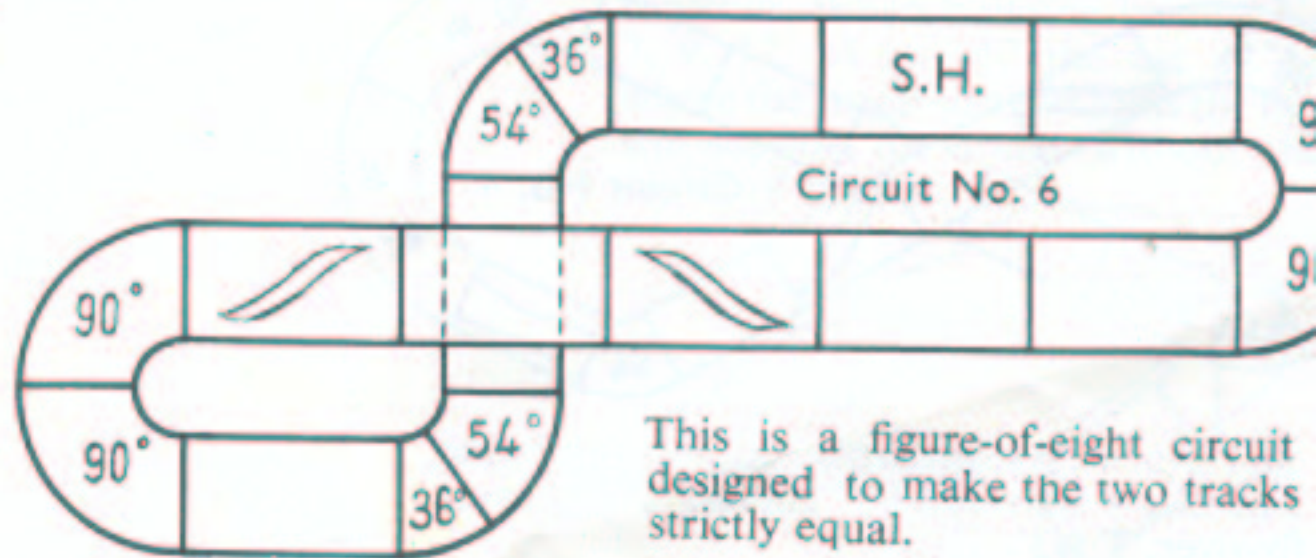


LAYOUT No. 8 : 10 straights, 1 straight with hump, 1 chicane, 3 internal 90° curves, 1 54° curve, 1 36° curve, 6' × 4'.

A very interesting right-angled circuit. Another of the straights could be replaced with a further chicane to add to the interest.



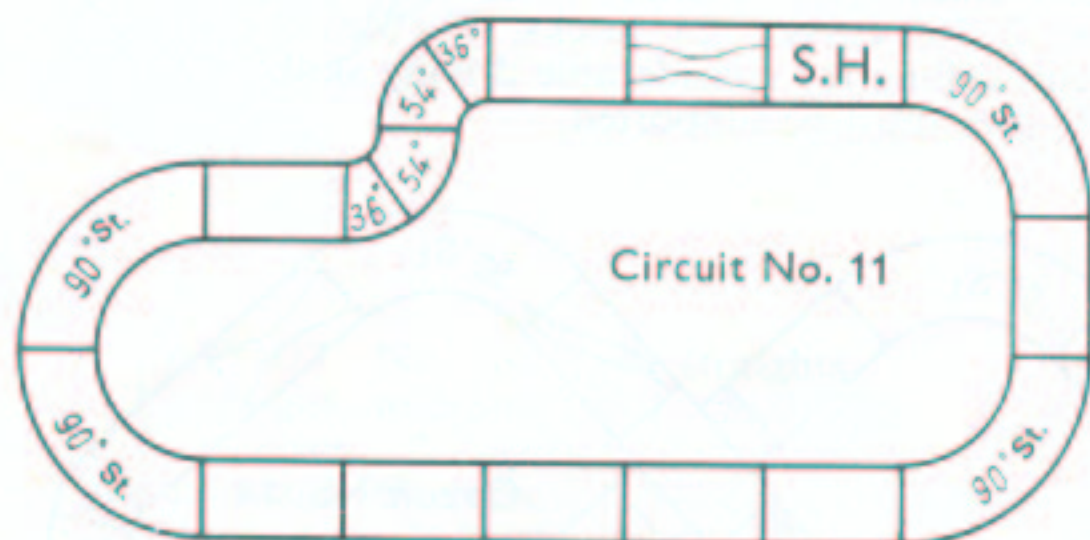
LAYOUT No. 6 : 7 straights, 1 straight with hump, 1 fly-over, 4 internal 90° curves, 2 54° curves, 2 36° curves, 6' × 2' 6".



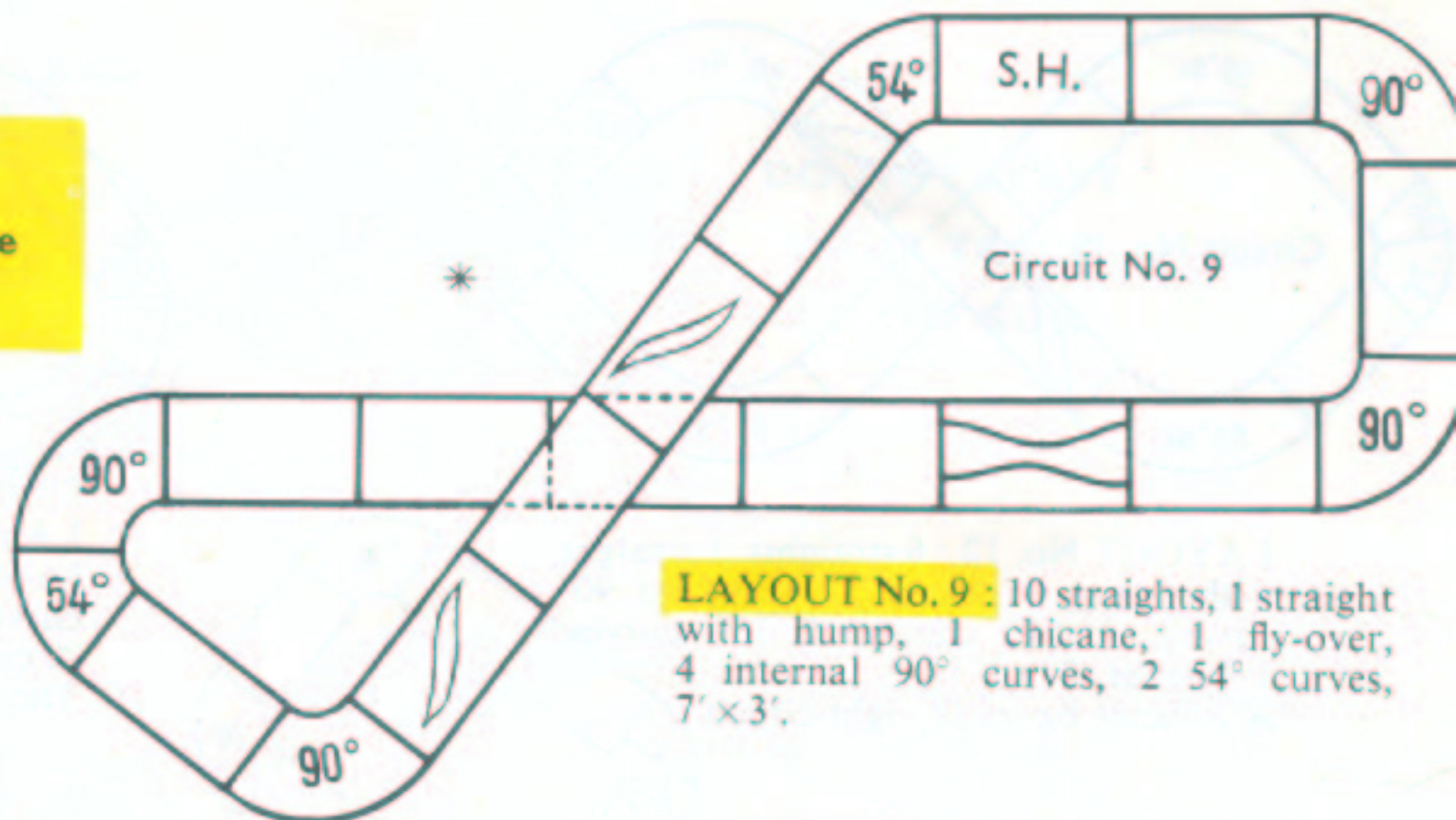
This is a figure-of-eight circuit designed to make the two tracks strictly equal.

GO-KARTS

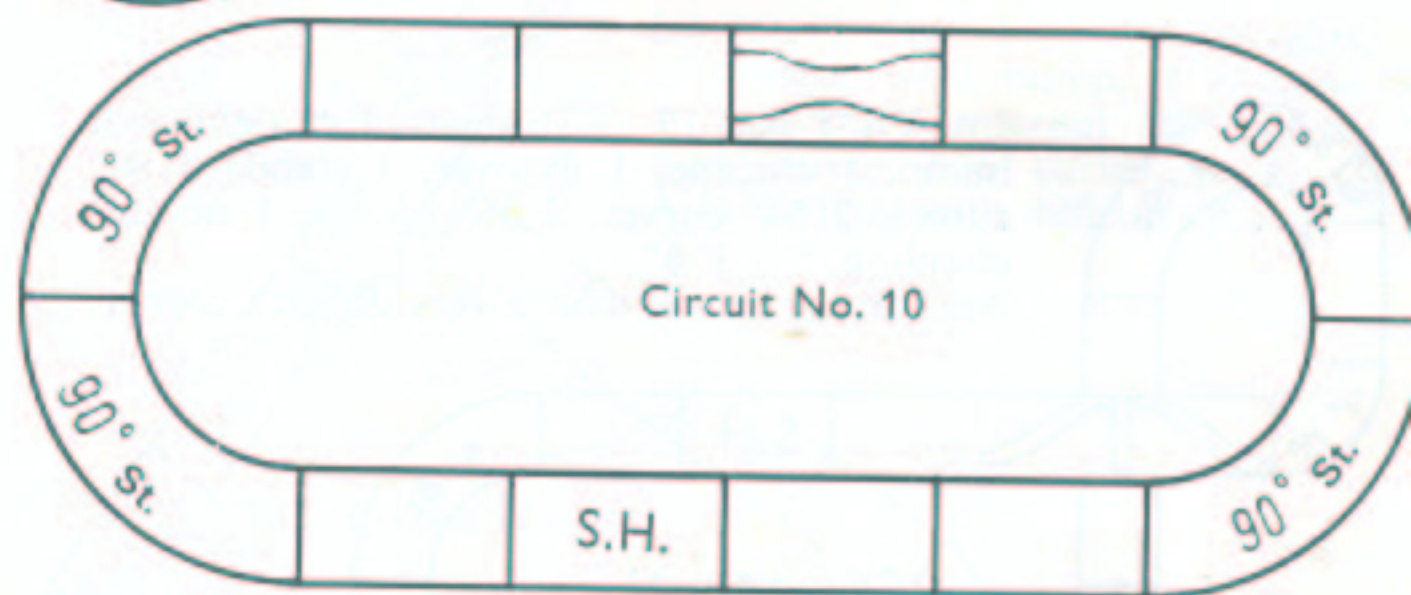
Layouts marked with an asterisk are NOT suitable for Go-Kart Racing



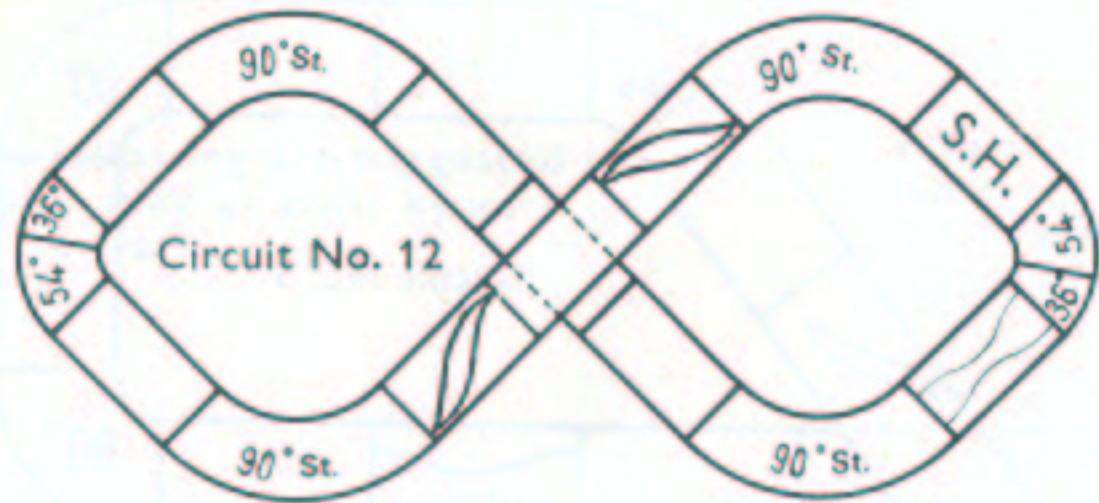
LAYOUT No. 11 : 8 straights, 1 straight with hump, 1 chicane, 4 standard 90° curves, 2 54° curves, 2 36° curves, 7' x 3' 6".
A fast layout but with cornering difficulties.



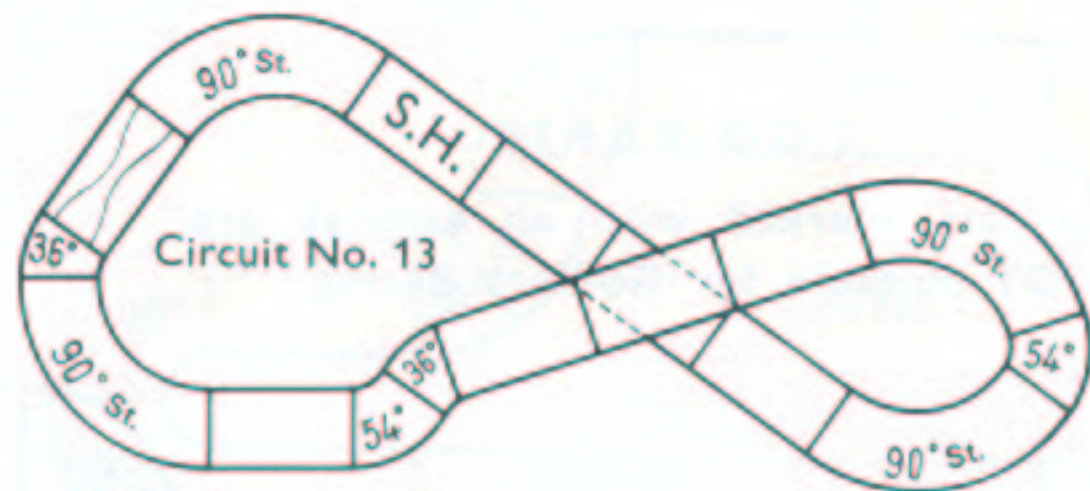
LAYOUT No. 9 : 10 straights, 1 straight with hump, 1 chicane, 1 fly-over, 4 internal 90° curves, 2 54° curves, 7' x 3'.



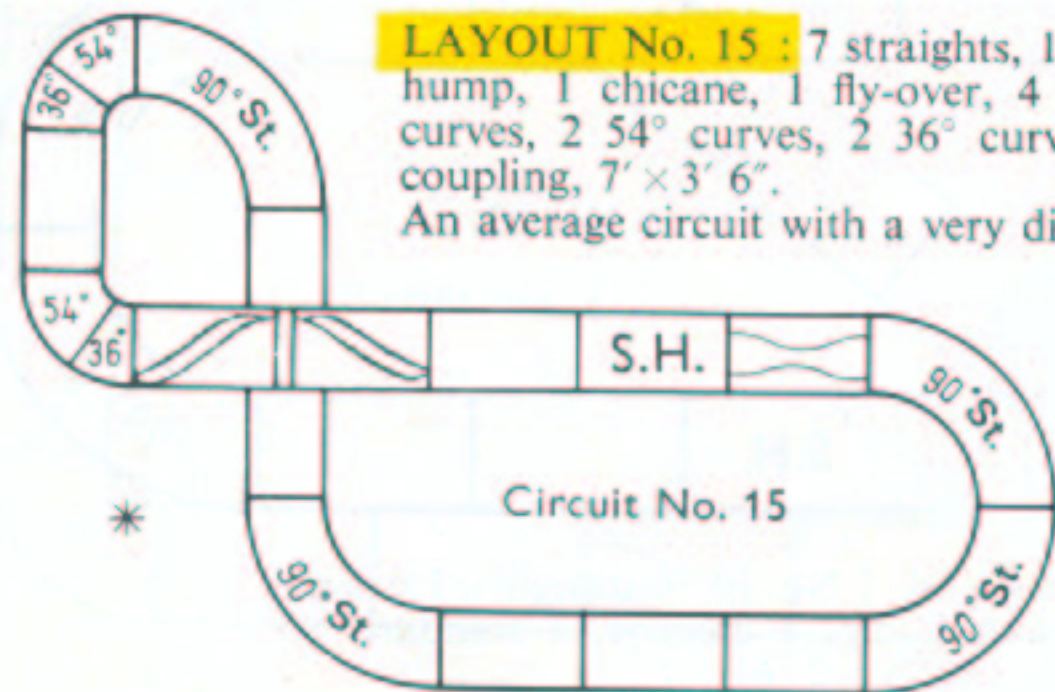
LAYOUT No. 10 : 6 straights, 1 straight with hump, 1 chicane, 4 standard 90° curves, 6' x 2' 6".
This is a particularly easy circuit.



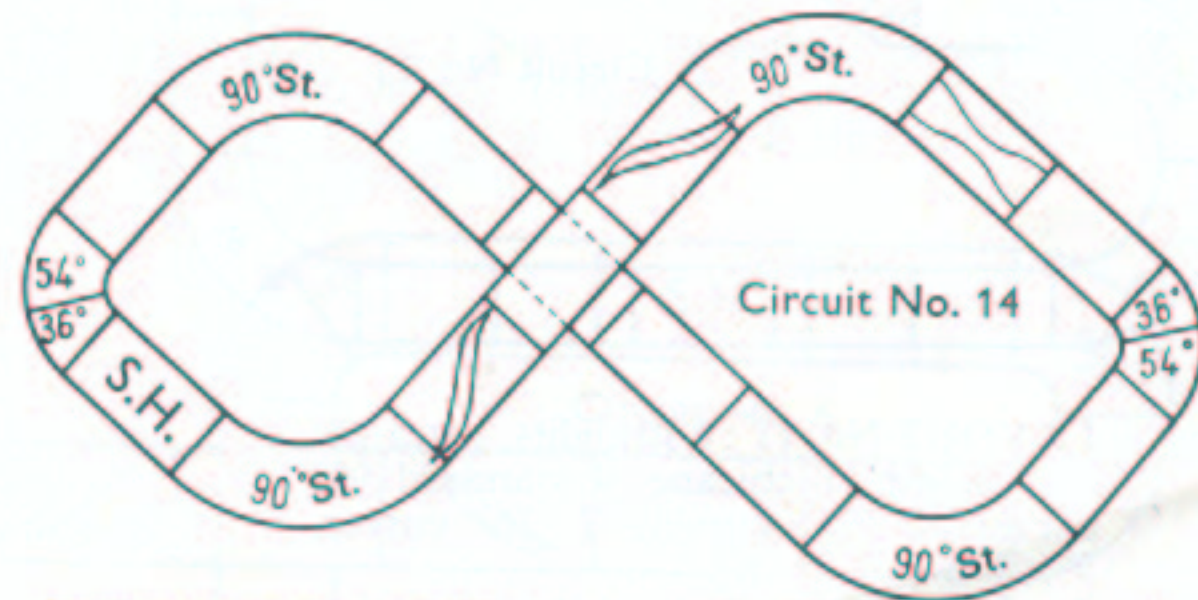
LAYOUT No. 12 : 6 straights, 1 straight with hump, 1 chicane, 4 standard 90° curves, 2 54° curves, 2 36° curves, 1 fly-over, 7' x 3'.
A difficult figure of eight circuit.



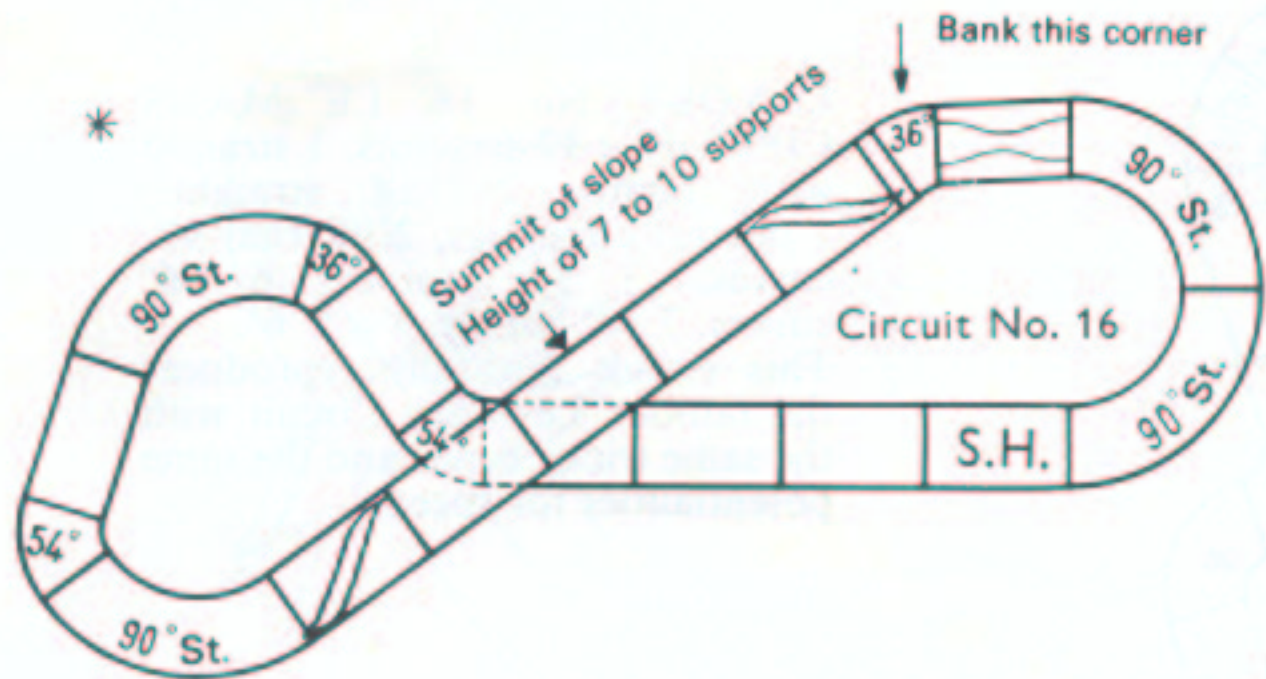
LAYOUT No. 13 : 7 straights, 1 straight with hump, 1 chicane, 4 standard 90° curves, 2 54° curves, 2 36° curves, 24 bricks, 7' x 3'.
A circuit calling for considerable driving skill. The fly-over must be supported.



LAYOUT No. 15 : 7 straights, 1 straight with hump, 1 chicane, 1 fly-over, 4 standard 90° curves, 2 54° curves, 2 36° curves, 1 neutral coupling, 7' x 3' 6".
An average circuit with a very difficult corner.

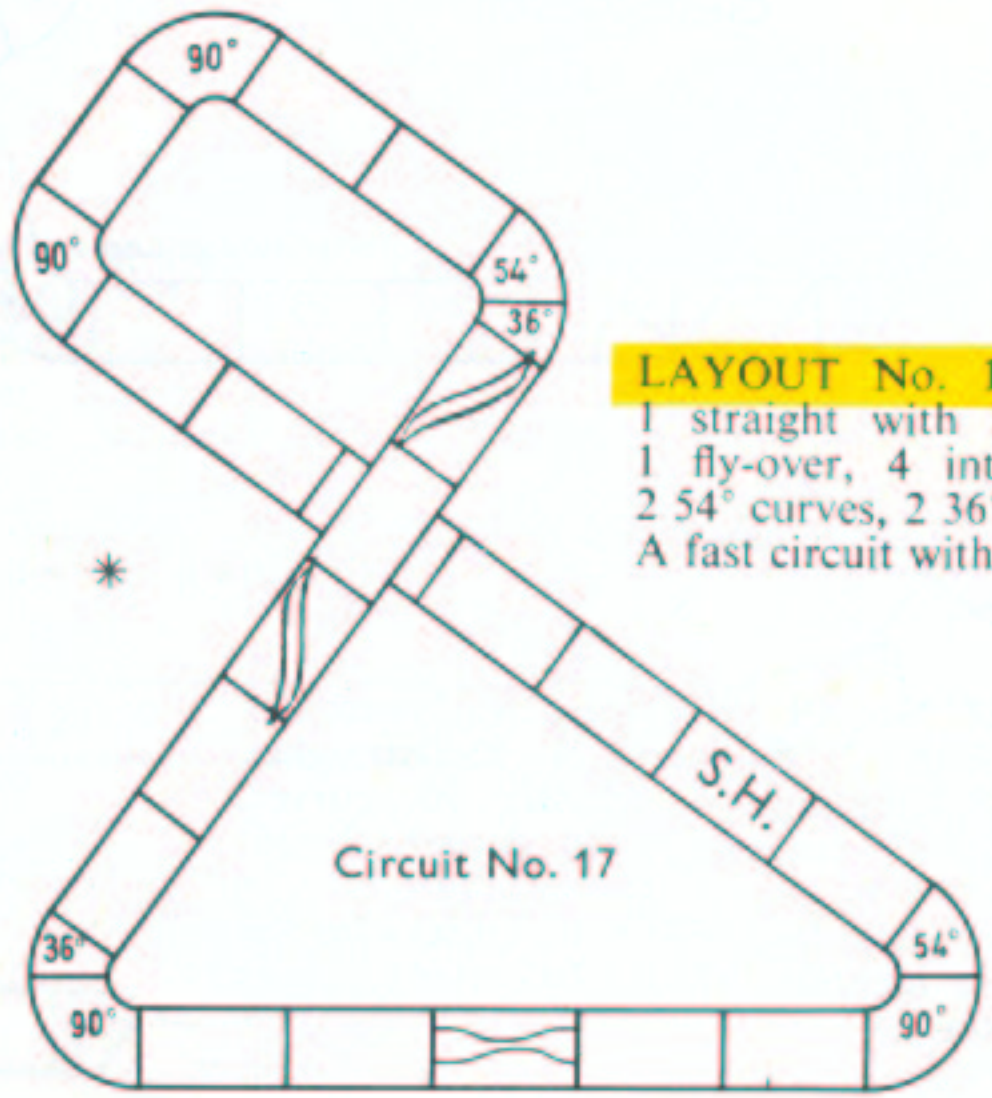


LAYOUT No. 14 : 8 straights, 1 straight with hump, 1 chicane, 1 fly-over, 4 standard 90° curves, 2 54° curves, 2 36° curves, 7' 6" x 3' 6".

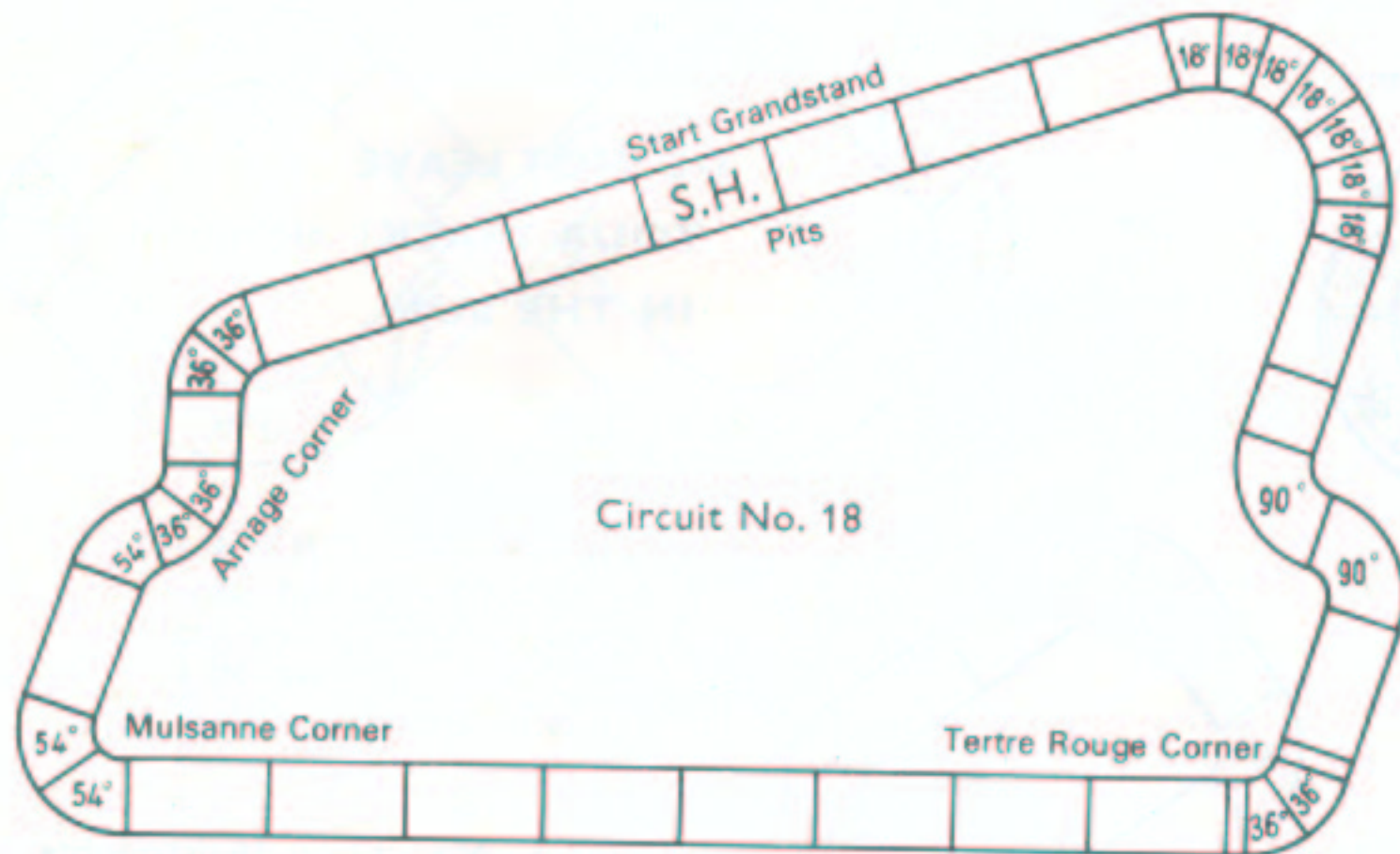


**DO NOT LEAVE
YOUR TRACK
IN THE SUN**

LAYOUT No. 16 : 8 straights,
1 straight with hump, 1 chicane,
1 fly-over, 2 neutral couplings,
4 standard 90° curves, 2 54° curves,
2 36° curves, 24 bricks, 8' x 3'.
This circuit is a little difficult to lay
down, but it is most interesting
because of its variety. The long
fly-over must be supported.



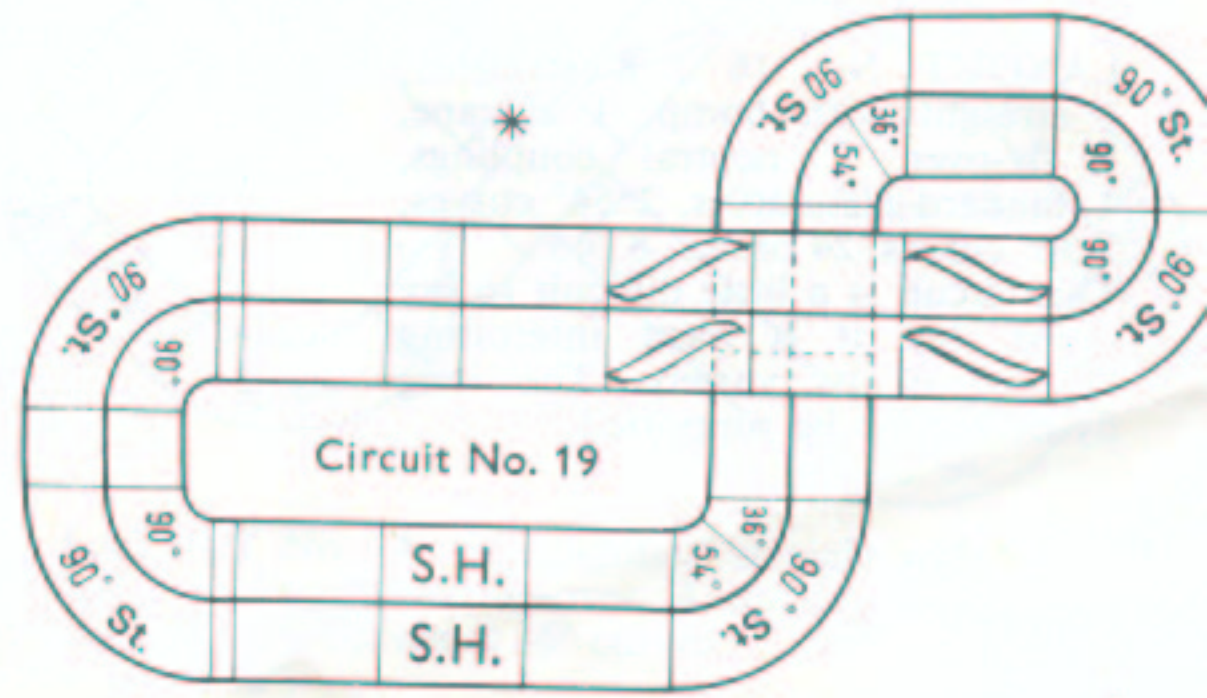
LAYOUT No. 17 : 16 straights,
1 straight with hump, 1 chicane,
1 fly-over, 4 internal 90° curves,
2 54° curves, 2 36° curves, 8' x 6'.
A fast circuit with difficult bends.

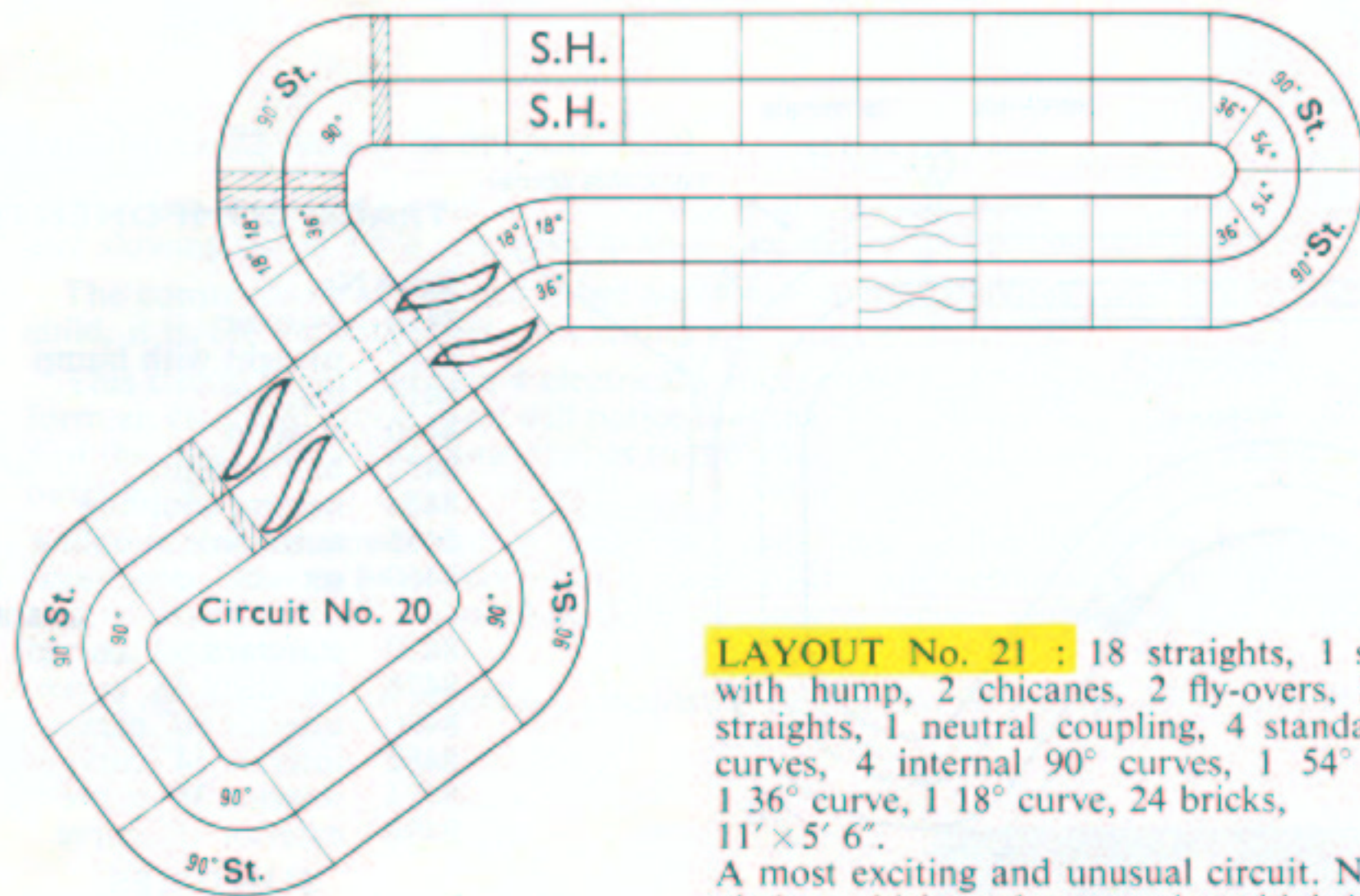


LAYOUT No. 18, LE MANS CIRCUIT

: 17 straights, 1 straight with hump, 2 half straights, 2 neutral couplings, 2 internal 90° curves, 3 54° curves, 6 36° curves, 7 18° curves, 9' x 5' 6". This circuit faithfully reproduces the famous Le Mans Circuit with the same tricky bends and the same potentialities for speed.

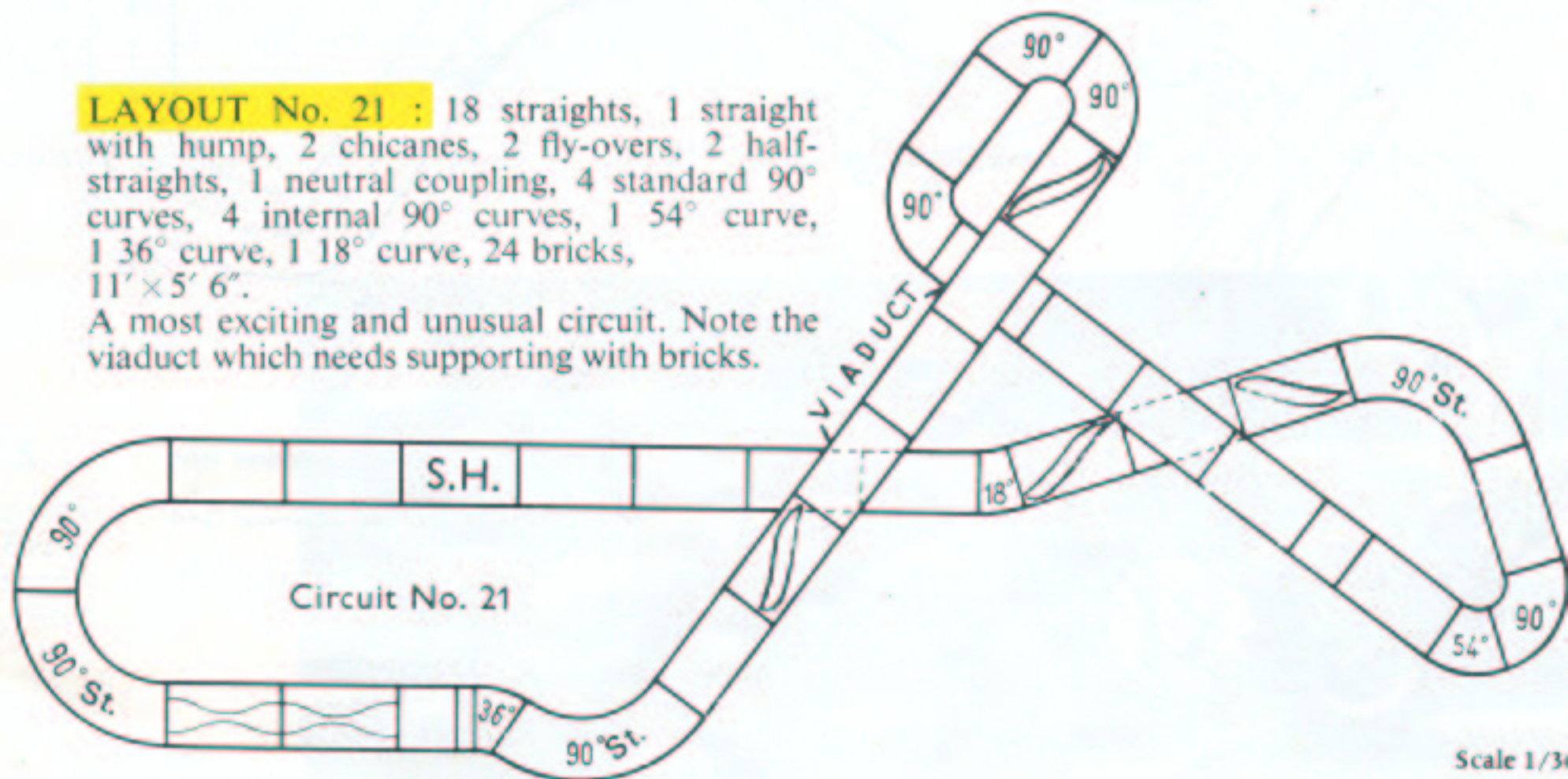
LAYOUT No. 19 : 16 straights, 2 straights with hump, 2 fly-overs, 4 half-straights, 4 neutral couplings, 6 standard 90° curves, 4 internal 90° curves, 2 54° curves, 2 36° curves, 8' x 4' 6". A well designed, fast circuit. The tracks for the 4 cars are identical. (N.B. Two power units are necessary.)

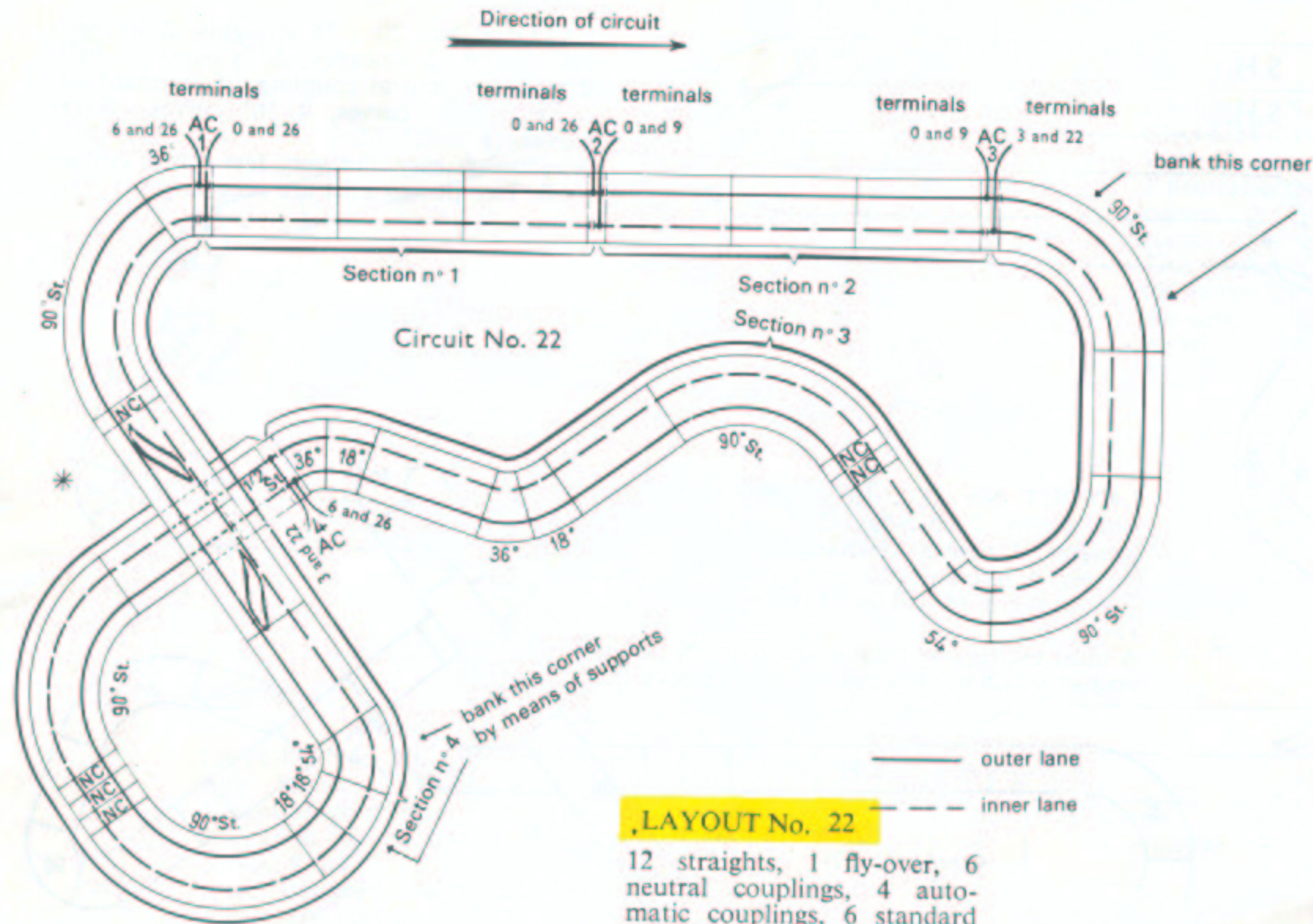




LAYOUT No. 20 : 36 straights, 2 straights with hump, 2 chicanes, 2 fly-overs, 2 half-straights, 8 neutral couplings, 6 standard 90° curves, 2 54° curves, 4 36° curves, 4 18° curves, 11' 6" x 5' 6".
 A relatively easy, but very fast 4 lane circuit.
 (N.B. Two power units are necessary.)

LAYOUT No. 21 : 18 straights, 1 straight with hump, 2 chicanes, 2 fly-overs, 2 half-straights, 1 neutral coupling, 4 standard 90° curves, 4 internal 90° curves, 1 54° curve, 1 36° curve, 1 18° curve, 24 bricks, 11' x 5' 6".
 A most exciting and unusual circuit. Note the viaduct which needs supporting with bricks.





LAYOUT No. 22

12 straights, 1 fly-over, 6 neutral couplings, 4 automatic couplings, 6 standard 90° curves, 2 54° curves, 3 36° curves, 4 18° curves and 1 half straight.

TRACK COMPONENT

- Sales No.
- 8410 fly-over
 - 8412 straight with hump
 - 8414 chicane
 - 8450 straight
 - 8452 half straight
 - 8454 neutral coupling
 - 8455 automatic coupling
 - 8460 set of couplings
 - automatic 1 neutr
 - 8470 standard 90° curve
 - 8476 standard 18° curve
 - 8480 interior 90° curve
 - 8482 interior 54° curve
 - 8484 interior 36° curve
 - 8496 exterior 18° curve

SUNDRIES

- 8610 set of numbers
- 8612 de luxe bodies
- 8614 rear axles—plain
- 8615 rear axles—chrome
- 8616 tyres
- 8618 pick-ups
- crash fencing
- clip for crash fencing

Layout No. 22 (layout on opposite page)

This is a suggested layout for a completely automatic circuit. Two cars can compete against each other, automatically accelerating and slowing down. Or if you wish to keep one car controlled manually you can 'race the hare'.

The construction of this and other automatic circuits requires considerable ingenuity and although it is beyond the capability of a child, it is, for the enthusiast, an exciting extension of the game.

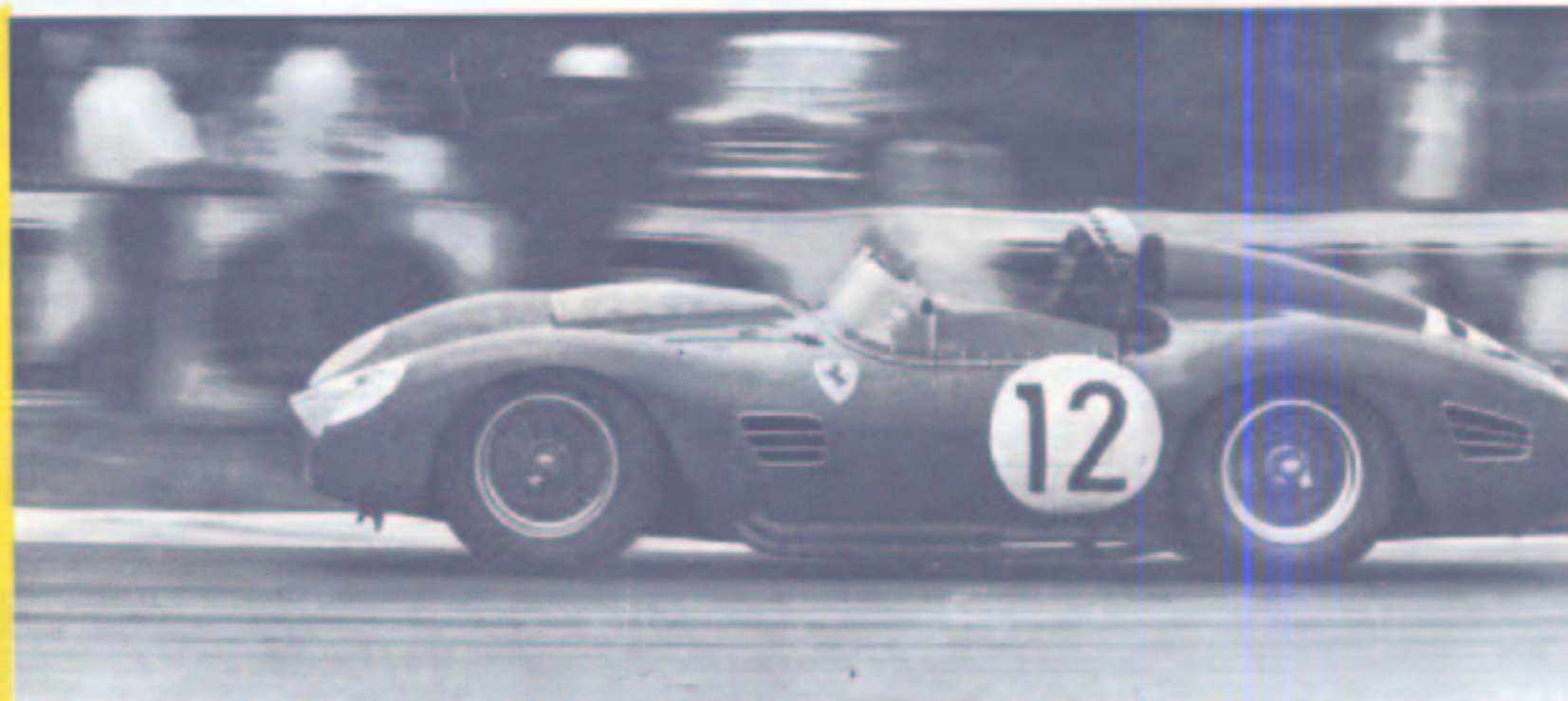
This circuit is divided into 4 electrically independent sections by means of the 4 automatic couplings. These have no fish-plates to form an electrical union. You will notice that the No. 1 automatic coupling is connected to section 1 of the inner track, but to section 4 of the outer track. The same applies to the other 3 automatic couplings, joined to the start of the inner sections but to the end of the outer ones.

One automatic power unit is needed for each lane, connected by the terminals indicated. Section No. 1, where the cars need full acceleration, has to have maximum voltage i.e. 26 volts (terminals 9 and 26). Section 2 is a deceleration zone, try 9 volts (terminals 0 and 9). Sections 3 and 4 should be taken at moderate speed, perhaps between 18 and 22 volts. The suitable voltage will only be found by trial and error.

It is not advisable in automatic circuits to use internal 90° curves. If 54° and 36° curves are used, then an 18° curve should be used immediately before.

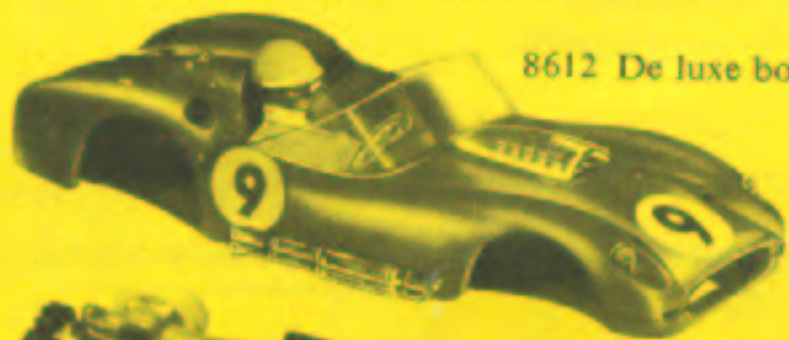
BANKING BLOCKS

As your skill—and your speed—increases it is advisable to bank the corners. Banking Blocks are available to provide this facility—each Block incorporating three different heights.



PRINCIPAL REPLACEMENTS

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9



8612 De luxe bodies



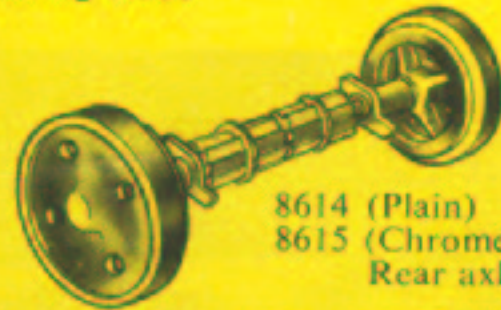
Chassis motor with rear axle



Vibrating blade



Fish plate



8614 (Plain)
8615 (Chrome)
Rear axle



8610
Set
of
numbers

Wheel disc



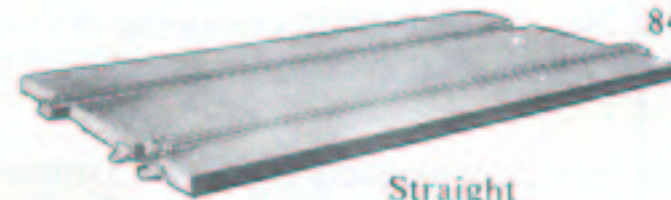
8616 Tyre

TRACK COMPONENTS



8450 Neutral coupling
(with no wires)

8455 Automatic coupling
(with wire)



8470 90° Standard Curve
semi-rigid

Straight
semi-rigid



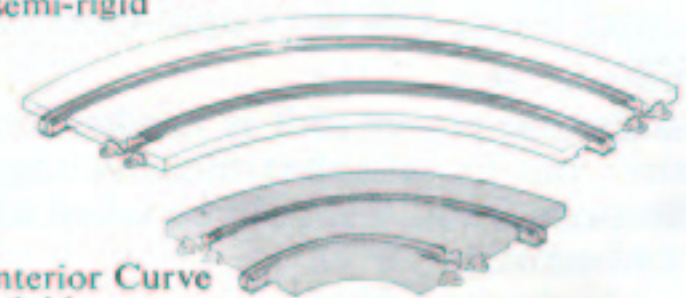
8452 Half Straight—flexible



Chicane
8410 Half Fly-over
(Set of 2)



8412 Straight with Hump



8480 90° Interior Curve
semi-rigid



8482
54° Interior Curve
flexible



8496
18° Exterior Curve
flexible
(for 5th and 6th lanes)



8484 36° Interior Curve
flexible



8476 18° Standard Curve
flexible



SOLD BY YOUR USUAL SUPPLIER

THE CARS



8018



8010

8010 D.B. Panhard

8012 Ferrari

8014 Competition Ferrari

This car has very powerful acceleration and is provided with a telecontrolled brake, operated by the accelerator, working on the rear wheels.

8016 Go-Kart

8018 Cooper



8012



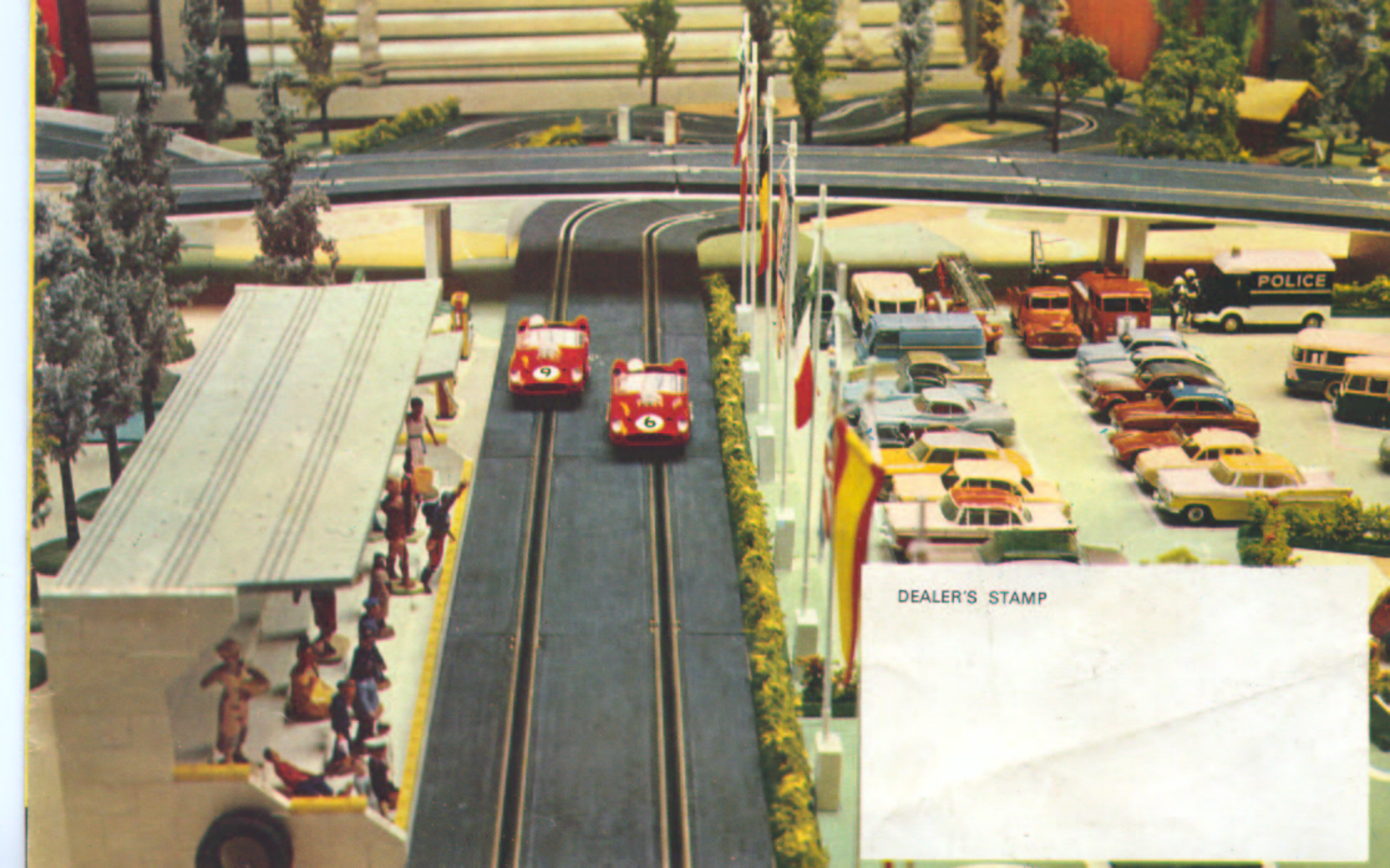
8016

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DEALER'S STAMP