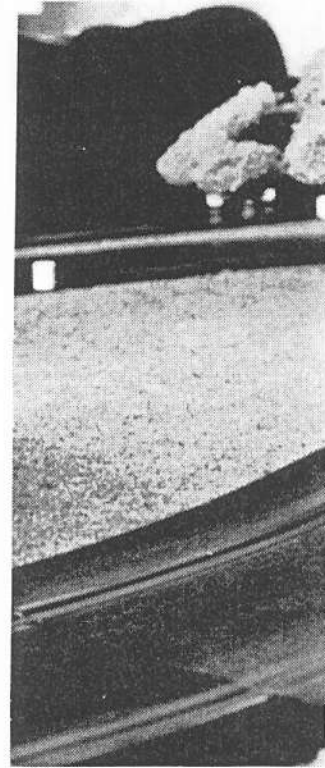


Home Circuits

A PERSONAL APPROACH



by Rob Cairns.

This article details a personal approach to producing a semi-permanent 2-lane layout for use in a spare bedroom or small area of a loft.

Introduction

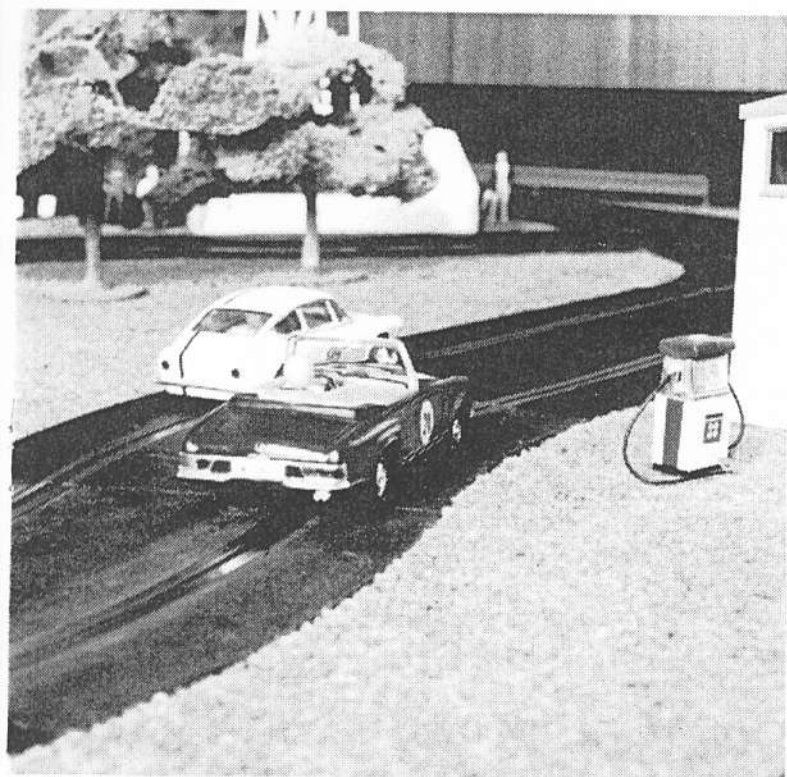
You can't beat a semi-permanent track for racing in your own home. By semi-permanent I mean a circuit that is fixed to a purpose-built table, with detachable support structure for easy storage of the complete layout. The advantages are as follows:

- * no time consuming setting-up period
- * electrical connections are less likely to fail
- * an electrical contact checking system can be fitted
- * buildings and scenery can be used to full effect
- * the track can be recessed into a flooring material
- * the circuit can be stored vertically if necessary
- * the track is more likely to remain in good condition

The circuit I use sits on its own purpose-made table. The dimensions of the tabletop were limited to 6ft. X 4ft, allowing it to be used in a relatively small room, yet still providing easy access for marshalling, around at least three of its four sides. I worked hard to fit as much interesting track as I could within this confined space. All track used in the original comes from the Scalextric stable however, it must be noted that the intersection piece is currently only available from SCX. The use of the Intersection, rather than a flyover, allows a flat circuit to be constructed, facilitating storage should the table need to be dismantled.

The circuit is basically one loop within another. To even up the lane lengths two crossover pieces are incorporated. There is space around the circuit to add scenery and accessories and also room on the longest straight for Scalextric pit-stop track (if you can get hold of this discontinued item).

As previously stated, a semi-permanent layout is less likely to suffer from faulty electrical contacts, however, unless you go to the effort of soldering all the electrical joints together, it is still possible for contacts to fail. It is worse when only one joint fails (especially in the vicinity of the power supply) as the problem may not be immediately apparent. This type of fault can severely impair a car's performance but is often difficult to track down. To



overcome this problem, the semi-permanent track incorporates a series of switches to break the electrical connection at a predetermined point in the circuit. If all other electrical connections are sound then a test vehicle will be able to complete a circuit of the track uninterrupted. If there is a faulty connection, however, there will be a dead section of

Summary Table

Circuit	- 2 lane
Dimensions	- 6ft X 4ft. (183cm X 122cm)
Lane Length	- 26ft. 10in. (812cm) each lane
track	- Scalextric/SCX
Materials	- Particle board, strip wood, Contiplas
Features	- Electrical contact checking
	- Twin power packs.

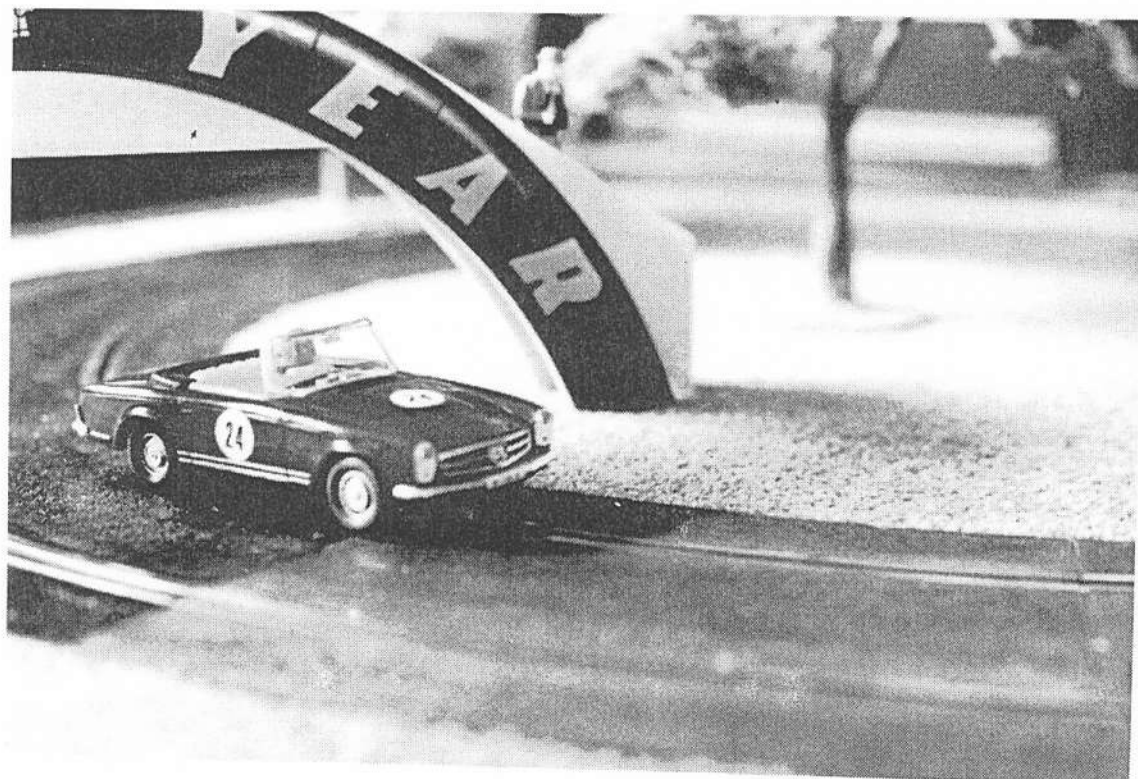
track created, between this and the known break. The faulty point will therefore be easy to identify.

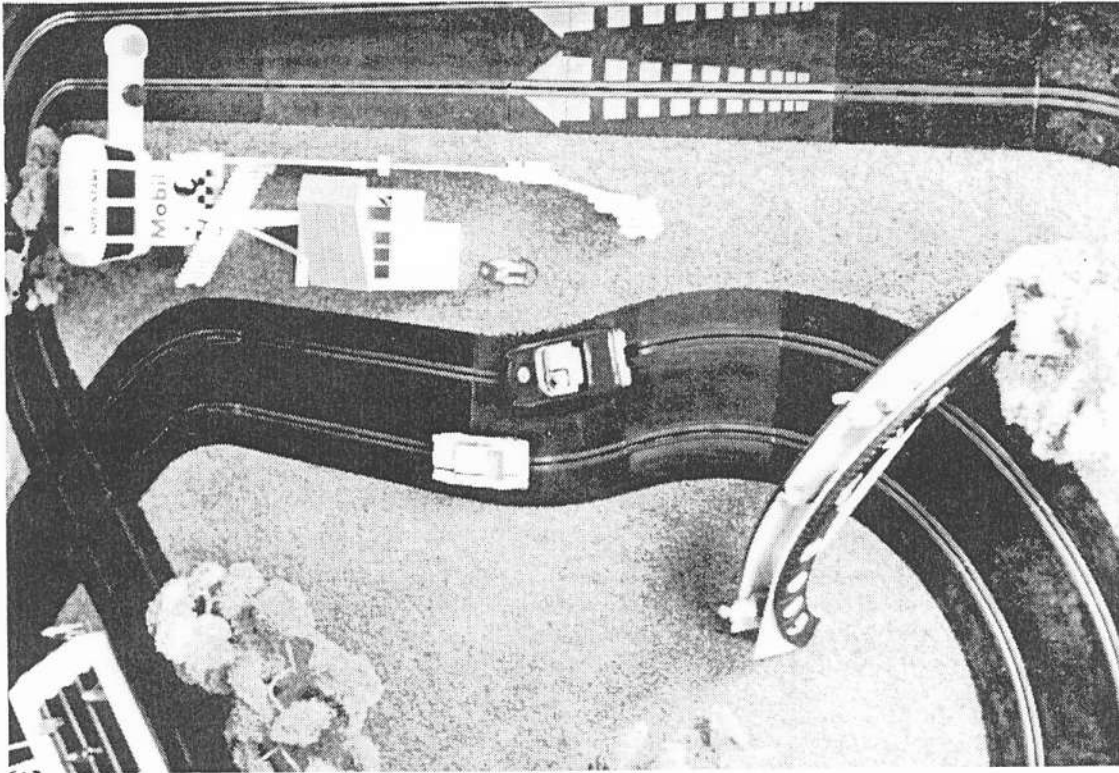
Twin power supplies are used - one for each lane. This is found to be better than a single supply, as it overcomes any problem of a power surge to one car, should the other suddenly depart from the track.

Construction

The main components of the table are four sheets of particleboard, 3ft. X 2ft. X 1/2in. The sections are joined using strip-wood (1 1/4 in. x 1/2in.) screwed to the undersurface. The same size strip-wood is also screwed to the edges of the table to resist bending.

The table sits on five legs, also fabricated from 1/2" particleboard. The four legs at each corner of the table are





2ft. tall and have an "L" shaped cross-section (viewed from above). They screw directly to the strip-wood surround. The fifth leg supports the centre of the table and sits in a groove made by two additional pieces of strip-wood screwed to the underside of the table. This fifth leg has a rectangular-box cross-section.

Panels of Contiplus (6in. x 5/8in.) are screwed to the strip-wood surround to provide borders for the track. These are reinforced with an "L" bracket secured to the upper surface at each corner and the ends of the Contiplus panels are finished off with a 900 section of plastic strip glued in place using an epoxy resin.

The tabletop is covered in a carpet material that is the same depth as the track. The circuit is laid on top of the carpet and the carpet is then cut to shape.

With the carpet removed and the circuit laid up on the board, small holes are drilled at the corners of each track section. The track is then pinned in place using panel pins hammered through the pre-drilled holes, into the tabletop. Certain pieces such as the long straight may also require pinning half way along their length. The carpet pieces are finally glued into the gaps using Copydex.

To protect cars that thunder into the track borders I use self adhesive insulating strip fixed to the Contiplus at vehicle body height. If you shop around you can get

twin-strip insulation that is very much the shape of Armco barrier. To finish the job off, use strips of trim tape as "barrier supports" so the Armco doesn't appear to be levitating.

As previously stated each lane has its own power supply unit and these are screwed to the underside of the table.

The electrical contact checker consists of a bank of four mini toggle switches mounted in a plastic box (a plastic case for photographic slides in this instance), screwed to the underside of the table. The electric breaks in the circuit are best made at either the intersection or one of the crossovers. On these sections, wires beneath the track carry the current across the junction. It is a simple matter to remove four of these wires (two for each lane) and replace them with eight longer ones connecting the track to the four remote toggle switches.

USING THE TRACK

Once the circuit is set up you'll need to check the electrical connections. Drive a car around the circuit on each lane to see if there are any obvious breaks in the electricity. Of course, even if the car manages to negotiate the complete circuit there may still be a faulty connection somewhere. Choose a lane and close one of its toggle switches. If all connections are good then the vehicle will

complete a circuit with no problem. If, however, there is a poor connection, a dead section of track will have been created thus identifying where the fault is. Continue with this procedure for each side of the power supply on each lane, then when this is complete make sure all switches are closed once more.

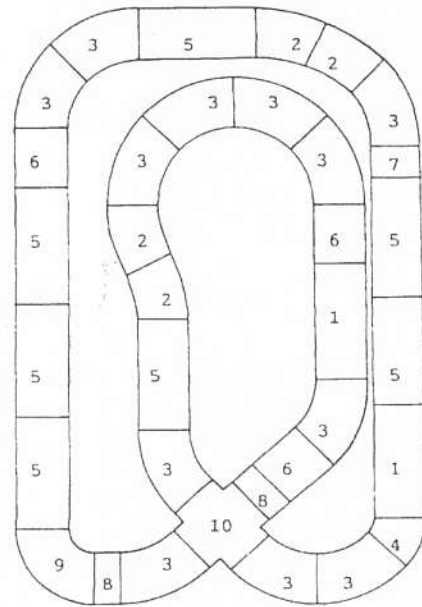
The use of carpet material to provide a level surface really helps the handling of the cars. It increases the effective road area and can provide better grip than the track itself. On non-Magnatraction cars your can really let the back end hang out!

The inclusion of an intersection and two crossovers means that there are a number of collision hazards. This may be viewed as either a good or bad thing, depending on how reckless your driving is. I don't particularly enjoy seeing cars rammed off the track but must confess that the risk is exciting. Penalties should be given if the second place car does not back off at these hazards. Significant skill is required on this circuit to make the most of the relatively few overtaking opportunities.

It's a good idea to alternate the direction of the circuit every so often. As well as being a refreshing change, it stops your guide blades becoming excessively worn on one side only!

Happy racing!

Circuit Layout



TRACK KEY

no.	item	SCX Cat. no.	Scalextric Cat. no.
1	cross-over	84080	C8006
2	outer curve	84020	C153
3	standard curve	84030	C151
4	inner curve	84010	C152
5	straight "D"	84060	C160
6	straight "C"	84050	C159
7	straight "B"	84040	C158
8	straight "A"	-	C157
9	double inner	-	C156
10	intersection	84090	-

