

RB7 Magazine Index

ISSUE No.	INSIDE F1	RC CAR WORLD	ASSEMBLY GUIDE
1	After Red Bull Racing won both the constructors' and drivers' championships in 2010, some doubted that it could repeat this outstanding performance in 2011. But the team, with its new Red Bull Racing RB7 car, was more than willing to bet on it - Page 3	CAR TECH > Modern technology and numerous tuning options make the Red Bull Racing RB7 an attractive model for beginners and experienced modellers alike - Page 9	Begin the assembly of your realistically detailed Red Bull Racing RB7 model by fitting together the lower and central parts of the front wing, along with its left and right base plates - Page 13
2	A great car and a pair of drivers that team principal Christian Horner described as 'Probably the best combination in recent history' brought Red Bull Racing its third double championship - Page 3	CAR TECH > RC model building opens up a world of possibilities. There are radio-controlled models of every type of vehicle, including track and off-road racing cars right through to aircraft and ships - Page 9	Continue putting together the components of the front wing, then assemble the components for the rear wing of your Red Bull Racing RB7 model - Page 11
3	Although the Red Bull Racing RB7 was the fastest car of 2010, Vettel kept being thwarted by technical problems. But alter a spectacular comeback, he secured the Driver's title in a dramatic final race - Page 3	CAR TECH > From Mini-Z speedsters to impressive Formula 1 racers over a metre long, the range of RC cars offers driving enjoyment in every size - Page 9	Aerodynamic add-ons give the front wing some finishing touches. In addition, you get the first wheel for your model - Page 11
4	The 2009 Formula 1 season was marked by new rules, a fierce 'arms race' — and Sebastian Vettel, who, in his first year with Red Bull Racing, finished as runner-up in the drivers' world championship - Page 3	CAR TECH > RC model cars are classified by the type of surface on which they are used - Page 7 CAR TIPS > If you don't have a workbench, it's worth making a portable assembly platform - Page 9	After assembling the front and rear wings, we begin to assemble the chassis, starting with the assembly of the first shock absorber for your model - Page 11
5	Toro Rosso driver Sebastian Vettel's first F1 victory attracted the attention of the Red Bull Racing Team - Page 3 CIRCUITS > The history of the Hockenheimring, a venue for the German GP, dates back to 1932 - Page 7	CAR TECH > A soft tyre tread has more grip, but it will also wear out quickly, so an RC racer who wants to mount the podium will always take along a selection of tyres of varying hardness - Page 9	Add the logo stickers to finish off the assembly of your models front wing - Page 11
6	'Ice-man' Kimi Räikkönen was the driver who benefited the most from Michael Schumacher's retirement - Page 3 TECHNOLOGY > The technology of F1 tyres has grown steadily more complex over the years - Page 7	CAR TECH > Superglue — cyanoacrylate adhesive — is excellent for work that requires high precision. But because of its extreme adhesive properties, you must take precautions when using it - Page 9	This issue includes the first part of your model's main chassis, and instructions for adding the logo stickers to the rear wing of the car - Page 11
7	The 2006 season was marked by the championship duel between Schumacher and Alonso - Page 3 CIRCUITS > The tiny principality of Monaco is home to one of the biggest events on the F1 calendar - Page 7	CAR TECH > The suspension of an RC car needs to be perfectly tuned to keep the tyres in close contact with the track surface - Page 9	This issue includes the left front tyre for your model RB7. It comes complete with its foam insert so that it's ready to be fitted to the wheel - Page 11
8	Just six years after it was created, Red Bull Racing won its first Formula 1 titles - Page 3 TECHNOLOGY > Front wings play a key part in the aerodynamic performance of an F1 car - Page 7	CAR TECH > Safety in model car racing is paramount, just as it is in full-size motorsport. Always bear the basic safety precautions in mind when handling and operating your RB7 or any other nitro-fuelled RC model - Page 9	Begin the assembly Work on your RB7's front suspension starting with the lower wishbones, then add some more stickers to the rear wing - Page 11
9	The 2005 season was marked by far-reaching changes in Formula 1. The game of tyre roulette was over, Alonso and Renault put an end to the Ferrari supremacy, and Red Bull Racing celebrated its Formula 1 debut - Page 3	CAR TECH > The road holding of an RC car depends crucially on its suspension. Find out more about its construction and what functions it performs - Page 7	Begin assembling the chassis of your Red Bull Racing RB7. In the first step you will be attaching the lower wishbones to the lower front part of the chassis. PLUS: Add more stickers to the rear wing - Page 11
10	Ferrari dominated in 2004, as Michael Schumacher clinched his seventh world title with four races to go - Page 3 TECHNOLOGY > Rear wings provide extra downforce to give the rear tyres added grip - Page 7	CAR TIPS > A well-organised workspace will make assembling your model RB7 much easier - Page 9 CAR TRACK > The rules for RC model competitions are set by national and international associations - Page 11	This issue includes a wheel and the right front tyre for your model RB7. The tyre comes complete with its foam insert so that it's ready to be fitted to the wheel - Page 13
11	The racing team founded by the legendary Enzo Ferrari way back in 1929 is the only one to have competed in every Formula 1 season since the world championship was inaugurated in 1950 - Page 3	CAR TIPS > Most asphalt or concrete surfaces, such as roads and driveways, are actually too rough to run an RC car on, so RC racing clubs have specially prepared tracks for the use of their members - Page 9	In this issue, you add the finishing touches to the right front wheel and begin the assembly of your model's steering mechanism - Page 11
12	The dominance of Ferrari and Michael Schumacher continued for a sixth year in 2003 Page 3 CIRCUITS > Japan's Suzuka circuit is one of the toughest and most demanding in the world Page 7	CAR TECH > The steering slider, which you received with issue 11, plays a major part in the control of your RB7 racer. It is the main linkage between the steering mechanism and the front wheels Page 9	In this issue, you assemble the steering crank of your RB7 and prepare the front lower chassis by fitting four spacers that will support the front upper chassis Page 11
13	In the 2002 season, all attempts to prevent Ferrari and Michael Schumacher winning the world championships proved unsuccessful Page 3	CAR TECH > For the tyres of your RC racer to have maximum grip when cornering, the steering system must be precisely adjusted. Before doing this, it is useful to learn the basics of the steering system Page 7	This issue, you will fit the front upper chassis and the front pushrod mount to the front lower chassis assembly of your model RB7 Page 11
14	The alliance between Williams and BMW promised more than it delivered, and ended after six seasons Page 3 CIRCUITS > Albert Park, Melbourne, is home to the season-opening Australian Grand Prix Page 7	CAR TECH > The various types of screws used to assemble your model RB7, and the screwdrivers and Wrenches that you will need Page 9	Continue assembling your model's front suspension system by fitting the front left upper wishbone onto the upper front chassis Page 11
15	The duel between Michael Schumacher and David Coulthard was a highlight of the 2001 season Page 3 CIRCUITS > The Indianapolis Motor Speedway is the USA's foremost motor racing circuit Page 7	CAR TECH > Camber — the tilting of a car's wheels in relation to the road surface — is an important factor in tuning the chassis and suspension to achieve optimum road holding Page 9	The assembly of your models front suspension system continues with the fitting of the front right upper wishbone onto the upper front chassis Page 11
16	In 2000, Michael Schumacher fought off stiff competition from reigning champion Mika Hakkinen to bring the drivers title to Ferrari for the first time in 21 barren years Page 3	CAR TECH > A servomechanism — or servo — in an RC model car is a device that converts electrical signals into mechanical movements, usually to operate the steering, throttle or brakes Page 7	In this issue, you will be fitting the steering servo to the front chassis assembly of your RB7 racer Page 13
17	In 1989, Formula 1 regulations banned the use of turbocharged engines. In their place came normally aspirated engines with a maximum capacity of 3.5 litres, which was reduced to 3 litres in 1995 Page 3	CAR TRACK > RC car clubs host national and international race meetings, held under strict regulations that ensure fairness and the smooth running of the events Page 7	Continue assembling the chassis of your RB7 racer by fitting the front bulkhead and adding the lower part of the nose section Page 11
18	McLaren and Ferrari were regarded as the most promising candidates for the Formula 1 titles in 1999 Page 3 TECHNOLOGY > The monocoque chassis is the basic structure of all modern Formula 1 cars Page 7	CAR TECH > The main chassis of your RB7 racer is a Duralumin plate to which many of the model's other key components are attached, and this overview describes where they are mounted Page 9	Connect the steering rod of your Red Bull RB7 to the steering linkage, then mount the front upper wishbones onto the front chassis Page 11
19	Scuderia Toro Rosso, Red Bull Racing's sister team, was once home to future champion Sebastian Vettel Page 3 TECHNOLOGY > First introduced in 2009, KERS is now a key part of Formula 1 technology Page 7	CAR TIPS > In making your model RB7, there is always a risk of over-tightening a screw in a plastic part of the model so that the thread no longer holds. Here are some tips for repairing the damage Page 9	This issue includes a model of Mark Webber's racing helmet and the decals that replicate its livery. When these have been applied, you can display the helmet alongside your model RB7 racer Page 11

20	Mika Hakkinen left his mark on the 1998 season, winning eight races and his first drivers' title. Alongside his driving skills, his McLaren MP4-13, designed by Adrian Newey, played a key role Page 3	CAR TECH > Unintentional contact with the boundaries of the circuit or with other vehicles are part of everyday life in RC car racing. The servo saver ensures that impacts on the wheels are not transferred to the steering servo Page 7	Assemble the servo saver and fit it into place on the output shaft of your models steering Servo Page 11
21	Jacques Villeneuve and Michael Schumacher were neck-and-neck in the 1997 championship Page 3 CIRCUITS > Belgium's scenic and historic Spa-Francorchamps circuit Page 7	CAR TECH > The suspension of an RC racer can be tuned to suit the characteristics of a particular track by adjusting the shock absorbers. Here are some tips for fine-tuning those of your model RB7 Page 9	In this assembly guide you will attach the front shock mount to the front upper chassis of your car. The front shock of your RB7 will be attached to this assembly Page 11
22	BMW Sauber was formed when BMW took over the Swiss F1 team Sauber in 2005, and it competed in Formula 1 from 2006 to 2009 Page 3	CAR TECH > Worn tyres reduce grip substantially — and that goes for RC racing cars as well as for full-size vehicles. Here's how you can change the tyres on an RC car without also having to replace the rim Page 7	In this assembly guide you will fit the left front pushrod, a key part of your car's suspension Page 11
23	In 1996, Damon Hill finally managed to outpoint Michael Schumacher and take the drivers' title Page 3 TECHNOLOGY > How cars and drivers communicate with their race engineers Page 7	CAR TECH > Setting a car's wheels so that they are angled slightly in or out is a way to improve its handling and cornering abilities Page 9	In this issue, you fit the front left axle into the knuckle arm, then attach this assembly to the upper and lower front left wishbones Page 11
24	In 1995, Michael Schumacher brought Benetton its first — and only — constructors' title Page 3 TECHNOLOGY > The types of engine used in F1 have changed many times over the years Page 7	CAR TECH > Ball bearings are used to reduce friction between rotating parts. We give you the low down on these humble but important components Page 11	In this assembly session we will fit the In this assembly session we will fit the wheel bearings to the left front wheel of your RB7 racer. The wheel will then be able to rotate with a minimum of friction Page 13
25	A series of tragic accidents in 1994, including those that led to the deaths of Roland Ratzenberger and Ayrton Senna, prompted F1's regulators to rethink the use of electronic driver aids in the sport Page 3	CAR TECH > To save space and weight, the front suspension of an F1 car uses a compact design, operating its shocks through pushrods Page 9	After the left front suspension, it is now the turn of the front suspension on the right. In this assembly guide, you will be fitting a pushrod that connects the wishbone and the front chassis Page 11
26	Three-times World champion Alain Prost, at the wheel of the 1993 Williams, was seen as the clear favourite for the drivers' title, but he faced stiff opposition in the form of his long-standing rival, Ayrton Senna Page 3		This time, you will assemble your RB7's second shock absorber and improve the performance of the first by fitting an additional washer, supplied with this issue. Then you will fit the pair of shocks to the front chassis Page 7
27	Mercedes made its comeback to Formula 1 in 2010 with two former championship winners Page 3 CIRCUITS > In the late 1970's, the Autódromo internacional Nelson Piquet at Jacarepagua, in Rio de Janeiro, became established as an F1 race track Page 7	CAR TIPS > Most connections in your RB7 model are made with screws. Nevertheless, adhesives play an important role in RC modelling — especially if the racer is damaged on the track Page 9	Finish assembling the right front suspension with the right upright and the right wheel axle. As the shocks are already attached, the suspension of the front chassis will then be complete Page 11
28	In 1992, Nigel Mansell beat the defending champion, Ayrton Senna, to win the drivers' title Page 3 TECHNOLOGY > The HANS system that protects the driver's head and neck Page 7	CAR TECH > The inclination of the steering axis in relation to a vertical line through the centre of the wheel is known as the castor angle. Here we explain how this affects the car's cornering behaviour Page 9	The two ball bearings supplied with this issue are for the right front wheel of your RB7 racer Page 13
29	Ayrton Senna's bravura performance in the 1991 season won him his third F1 driver's championship. This time, his toughest opponent was not Alain Prost, but the Williams driver Nigel Mansell Page 3	CAR TECH > The set-up process for every RC racer should include adjusting the steering geometry so that the car is less likely to skid when cornering. Here are the details of what you should bear in mind Page 7	Fit the two lower nose air fences and complete the steering assembly by joining together the two track rods, adjusting them and attaching them to the front chassis Page 11
30	During the 1980's, technical developments in Formula 1 included advances in engine design, electronic engine management systems and structural materials, such as carbon Page 3	CAR TRACKS > Europe is home to some of the worlds best RC model racing circuits, and in the first of an occasional series we take a look at one of these, MRT Rosenheim in southern Germany Page 9	In this session, you will attach the front chassis assembly and the left and right bargeboard stays to the main chassis of your RB7 racer Page 11
31	Having had to admit defeat by a small margin in the previous season, Ayrton Senna was intent on revenge in 1990. His main rival was the defending champion, Alain Prost, now driving for Ferrari, who did his best to thwart him Page 3	CAR TECH > Accurate timekeeping is now as indispensable in RC model racing as it is in Formula 1. The technology involves transponders in the cars and induction loops buried in the road surface Page 7	This time, you will fit the two chassis sides to the main chassis plate, which will complete the assembly of the central section of your car's base Page 11
32	Dramatic scenes involving the McLaren team-mates Ayrton Senna and Alain Prost dominated Formula 1 in 1989 In the first season Without turbos, there were exciting head-to-head races between them Page 3	CAR TECH > In the 1970's, RC car modelling was at a pioneering stage. Drivers raced against each other using huge remote controls, mostly with home-made cars and on makeshift tracks Page 7	In this issue, you will fit the rear diffuser to the floor pan of your RB7 racer. In a later issue, it will be connected to the upper rear bulkhead Page 11
33	Japanese car maker Toyota ran a works team that raced in Formula 1 from 2002 to 2009 Page 3 CIRCUITS > Kyalami, in South Africa, hosted a total of 20 F1 grands prix from 1967 to 1993 Page 7	CAR TRACK > Strict rules apply to RC model car races. We explain how an RC race is run and the criteria an RC car must meet in order to participate Page 9	This time, you will fit the tail light mount onto the rear diffuser of your model Red Bull Page 11
34	Right from the start, it was clear that McLaren would dominate the 1988 season — the last in F1 's first era of turbocharged engines — and that one of the team's drivers would win the championship Page 3	CAR TECH > If an RC model car's moving parts are not regularly lubricated, they will wear out prematurely. We look at the commonest lubricants and their uses Page 9	With the installation of the rear bulkhead, you will complete the chassis floor of your RB7 and your car will be ready for installation of the rear suspension Page 11
35	In 1987, the big battle was not between the technically superior Williams team and its rivals but between its two drivers, Nelson Piquet and Nigel Mansell Page 3 TECHNOLOGY > We take a look at today's F1 steering wheels, which do far more than simply steer Page 7	CAR TRACKS > As host to various international and national championships, Ettlingen is one of the most active model racing car circuits in Germany Page 9	Now it's time to start assembling your RB7's rear suspension. In this issue, you will work on the lower left rear wishbone, then fit it to the rear of the chassis Page 11
36	The Swiss team Sauber has been involved in F1 since 1993 when it made its debut in the South African GP Page 3 CIRCUITS > The Circuit Paul Ricard, in the South of France, hosted the French Grand Prix 14 times Page 7	CAR TECH > An important consideration in the choice of wheels for an RC car is undoubtedly their appearance, but it also pays to know the properties of the various materials of which they are made Page 9	In this issue, you will continue assembling and fitting the rear suspension to your RB7 racer Page 11
37	At the beginning of a dramatic F1 season in 1986, it seemed that McLaren had been dealt a poor hand compared to Williams. But the championship battle turned out to be closer than anyone had expected, and the outcome wasn't decided until the last race Page 3	CAR TECH > A low-slung chassis has the advantage of allowing higher cornering speeds, but it's the condition of the track that determines the minimum ground clearance. Here's how to adjust ground clearance correctly Page 7	The differential assembly is a key component of your model's drivetrain. In this issue, you will put together the first components of this assembly and fit the left diff shaft Page 11
38	In 1984, Alain Prost had finished half a point behind his team-mate Niki Lauda in the struggle for the title. In the 1985 season, the French ace used his head and dominated the F1 World championship Page 3	CAR TECH > Your RB7 racer has rear-wheel drive. The driveshaft between the rear wheels is not rigid but divided into two parts, and in the gap between them, the differential does its job Page 7	In this issue, you will continue working on the differential by fitting the bevel gears and the bevel shaft. You will also pack the assembly with grease Page 11

39	The works team of the Japanese car and motorcycle manufacturer Honda recorded only three Formula 1 GP wins but, as an engine supplier, it has been a multiple Winner in the senior category of motorsport Page 3	CAR TECH > The gearbox is a crucial part of your RB7 models transmission. We describe its basic components, explain its function and outline the various tuning options that you have Page 7	In this session, you will complete the assembly of your RB7 racer's differential. It will then be ready to be mounted on the model's lower rear bulkhead Page 11
40	In the 1984 season, McLaren driver Niki Lauda eventually triumphed over his team-mate Alain Prost Page 3 TECHNOLOGY > Hidden from the public eye: the development testing of an F1 car Page 7	CAR TRACK > A profile of top RC model driver Lamberto Collari. With nine world and six European championship titles to his credit, the Italian has been called the Michael Schumacher of RC car racing Page 11	The drive bevel gear is a key component of your RB7 racer's transmission. In this issue, you will fit it into the differential case and engage it with the diff ring gear Page 13
41	After a thrilling duel between Alain Prost and Nelson Piquet both driving turbo-powered cars, the 1983 drivers' championship was won by Piquet Page 3 CIRCUITS > The Red Bull Ring circuit in Austria has enjoyed along and eventful history Page 7	CAR TRACK > A profile of Italian driver Daniele Ielasi, who has been one of a small, elite group of top European RC car drivers for more than a decade Page 9	Continue building your model RB7 racer by completing the differential assembly and then fixing the upper rear bulkhead into position Page 11
42	From 1991 to 2005, the British-Irish team Jordan GP competed strongly in Formula 1 Page 3 TECHNOLOGY > During the practice sessions before a GP, the teams optimise the set-up of their cars Page 7		In this assembly guide, you will assemble your RB7 racer's rear shock absorber mount and then fix it onto the top of the car's rear bulkhead Page 11
43	With a total of 11 different winners in 16 races, the 1982 season was one of the most dramatic in the history of F1 Page 3 CIRCUITS > Two F1 GPs took place in the parking lot of Caesars Palace hotel and casino in Las Vegas Page 7	CAR TRACK > You can control the hardness of an RC racing car's tyres by using foam inserts of different densities. Find out how the choice of insert material the tyres' affects Page 9	Continue assembling your RB7 racers rear suspension by fitting the left upper rear wishbone Page 11
44	In the 1981 season, the Argentine driver Carlos Reutemann made every effort to crown his already successful racing career with a world title, but he faced fierce competition from the young Brazilian Nelson Piquet Page 3	CAR TECH > A two-speed gearbox can significantly improve the performance of an RC car. This device automatically changes the gear ratio according to the engine speed. We explain the technology behind it Page 7	In this assembly guide, you will continue building up your RB7 racer's rear suspension by fitting the right upper rear wishbone Page 11
45	The 1970's was an era of experiment and innovation in Formula 1, but also one that saw the tragic deaths of more than a dozen drivers Page 3	CAR TRACK > The Warlebergring is the only permanent RC model road circuit in northern Germany, and so it attracts drivers from all over the region Page 9	The left rear hub carrier provides the link between the upper and lower rear wishbones on the left-hand side of your RB7 model racer Page 11
46	The 1980 season was a milestone in the history of Williams, as it was when the team won its first F1 titles Page 3 TECHNOLOGY > Pitstop tactics in Formula 1 can make the difference between victory and defeat Page 7	CAR TRACK > The Lostallo circuit in Switzerland makes high demands on both driver and car, and the venue hosts local, national and international events Page 9	In this Assembly Guide, you will fit the left rear wheel shaft of your RB7 into the rear left hub carrier that you assembled in the previous issue Page 11
47	The 1979 season saw the first win for a turbocharged car in F1 although the technology had yet to be perfected. The drivers' championship was won by Jody Scheckter in a car with a normally aspirated engine, the Ferrari 312T4 Page 3	CAR TECH > An overview of the nuts and screws used in model making Page 7 CAR TIP > Using thread-locking compound to fix nuts and screws securely in place Page 11	In this Assembly Guide, you will fit your RB7's left rear driveshaft, which transmits engine power from the differential to the left rear wheel shaft and thus to the left rear wheel Page 13
48	British American Tobacco took over the Tyrrell team in 1997 and two years later renamed it BAR Page 3 CIRCUITS > The Nurburgring's grand prix circuit is a pale shadow of its former self, as the infamous Nordschleife (North Loop) is no longer part of it Page 7		Apart from a transparent spacer ring, the two rear shock absorbers on your RB7 are identical to those at the front. In this issue, you fit and adjust the first of them Page 11
49	The 1978 F1 season was dominated by the Lotus team and its ground effects cars Page 3 TECHNOLOGY > In the late 1970's, the introduction of ground effects started a new era in F1 racing Page 7		From working on the chassis of your RB7 racer, you now turn your attention to its aerodynamics by completing the assembly of the rear wing Page 11
50	In the late 1970s, disagreements between FOCA, the body representing most of F1's constructors, and FISA, the sport's ruling body, escalated into open warfare Page 3	CAR TECH > RC modelmaking requires accurate work, for which a high-quality cutting tool is often the key to success. We describe the tools that you will need when building your RB7 racer Page 9	The right rear hub carrier provides the link between the upper and lower rear wishbones on the right-hand side of your RB7 model racer Page 11
51	In the 1977 season, a year after his serious accident, Niki Lauda won the drivers' championship with ease Page 3 CIRCUITS > The circuit at Imola is often regarded as Ferrari's home track because of its proximity to the team's headquarters at Maranello Page 7	CAR TRACK > The Motorsport Club of the Braunschweig (Brunswick) Police in Lower Saxony, Northwest Germany, operates a well-equipped RC racing circuit. The 290-metre track has been in use since spring 2010 Page 9	In this Assembly Guide, you will fit the right rear wheel shaft of your RB7 into the right rear hub carrier that you assembled in the previous issue Page 11
52	Williams is one of the largest and most enduring teams in Formula 1. The beginnings of this British outfit were relatively modest, but, with a lot of perseverance, team boss Frank Williams took it to the top Page 3	CAR TECH > While the engine of your RB7 is driven by nitro fuel, its electrical components draw their power from the car's onboard batteries Page 9	In this issue, you will fit your RB7's right rear driveshaft, which transmits engine power from the differential to the right rear Wheel shaft and thus to the right rear wheel Page 13
53	In 1976, Niki Lauda's near-fatal accident helped James Hunt to snatch the drivers' title Page 3 TEAM PORTRAIT > In 1976, the oil industry magnate Waiter Wolf created his own F1 team, but the venture was destined to be short-lived Page 7		Take another step towards the completion of your model's rear end by fitting the left rear tyre to its wheel Page 11
54	For the 1975 season, Ferrari had attracted the talented Austrian driver Niki Lauda from the BRM team as part of its efforts to bring the world championship back to Maranello, after an 11-year gap. The teams faith in him would prove to be justified Page 3		In this issue, you will assemble the second of your RB7's two rear shock absorbers, then fit them both into place on the chassis Page 7
55	In 1999, the Ford Motor Company took over Jackie Stewart's F1 team and renamed it Jaguar Racing Page 3 TECHNOLOGY > If track conditions become dangerous during a race, the safety car is deployed Page 9	CAR TRACK > With one world and two European titles, Michael Salven is not only the most successful German RC driver but also a respected model car designer Page 11	The main shaft is the first of a series of drive shafts that transmit the power efficiently from your RB7's engine to its rear wheels Page 13
56	After Emerson Fittipaldi's surprising move from Lotus to McLaren, the world of motorsport was eager to see how this popular Brazilian driver would fare in 1974. His performance exceeded all expectations Page 3	CAR TECH > Now that the drivetrain of your RC car is taking shape, we look at the system in more detail and give you an overview of the two types of transmission that are used on RC models Page 7	The gearbox spur gear transmits the rotation of the engine pinion to the main shaft of the drivetrain, via a pin that locks the gear to the shaft. In this issue, you assemble the gear and mount it on the shaft Page 11
57	In 1973, Jackie Stewart fought hard and snatched the drivers' title back from Emerson Fittipaldi Page 3 CIRCUITS > Le Mans is famous for its 24-hour race, but a Formula 1 grand prix has also been held there, on its less well known Bugatti Circuit Page 7		Continue building up your RB7 racers transmission system by adding a cup joint and bail bearing to the end of the main shaft and spur gear assembly, which you put together in the last issue Page 11

58	In 1972, the Lotus oars appeared for the first time in their new black-and-gold JPS livery, and Emerson Fittipaldi drove one of them to win the first of his two F1 drivers' championships Page 3	CAR TECH > The design and operation of an RC model's braking system Page 7 CAR TRACK > The Florida Winternats, the first big event on the RC racing Page 9	In this issue, you begin assembling your RB7 racer's braking system by putting the brake rotor onto the gearbox output shaft, and then fit the the throttle servo mounts onto the chassis Page 11
59	The story of the F1 team founded by timber merchant Ken Tyrrell in 1968 Page 3 CIRCUITS > The Circuit Gilles Villeneuve in Montreal, home of the Canadian Grand Prix Page 9		The engine mount supplied with this issue is screwed to the chassis to make a solid, heat-resistant base for your model's power plant Page 11
60	After having to use a March chassis in 1970, the Tyrrell team built its own car for 1971. This car, the Tyrrell 003, proved to be a great success and, in the hands of Jackie Stewart, it dominated the world championship Page 3	CAR TRACK > In the 1970s, some RC car pioneers in the Austrian city of Graz got together to race their cars. Twenty years later, the club they formed found a permanent home at the Stohr-Ring circuit Page 7	In this issue, you will fix the centre differential housings to the chassis and install the main shaft of the transmission, then assemble the brake callipers and pads Page 9
61	Jochen Rindt joined Lotus for 1970, hoping to further his ambition of winning the world championship. The popular Austrian driver did win the title that year, but he paid for it with his life Page 3		The brake cam and brake rod complete the disc brake of your RC racer. In this session, you will add these components to the brake, then fit the assembly in place on the chassis, together with the gearbox cover Page 7
62	In the 1960s, Formula 1 entered a new era. The classic front-engined car with a spaceframe chassis survived, for a while, but the rear-engined car with a monocoque chassis quickly became the norm, and aerodynamics were playing an increasingly important Page 3	CAR TRACK > For many years, the AMC Hamm circuit in western Germany has been one of the country's top venues for RC racing Page 9	In this session, you will assemble the central section of your RB7 racers drivetrain so that it is ready to be fitted to the chassis in the next issue Page 11
63	Driving a Matra International MS80, Scottish driver Jackie Stewart was hard to beat in 1969. With six GP wins, he took the drivers' championship crown and gave Matra the only constructors' title it ever won Page 3	CAR TECH > Nitro engines for RC cars come in many different shapes and sizes. Here's a run-down of the commonest types and some information about the engine capacities allowed in RC car racing Page 7	In this session, you connect the two driveshafts to the driveshaft mount assembly from the previous issue and to the front and rear differentials Page 9
64	The 1968 F1 world championship was won by Lotus driver Graham Hill, but once again the season was marred by multiple fatalities Page 3 CIRCUITS > A portrait of Brands Hatch, which hosted F1 championship races from 1964 to 1986 Page 7	CAR TECH > The GX21 engine that powers your RB7 racer has some highly developed features, making it a powerful but compact unit. Read all about the structure and function of this two-stroke nitro engine Page 9	With this issue, you have received the crankcase of the GX21 engine for your RB7 racer. In coming issues, you will fit the crankshaft and piston into this precisely manufactured die-cast block and add the cylinder head Page 13
65	In the 1967 season, Brabham was the strongest constructor and Denny Hulme won the drivers' title Page 3 TECHNOLOGY > The conditions that affect the grip of the tyres and the roadholding of an F1 car Page 7	CAR TECH > As well as transmitting the movement of the piston to the transmission, the crankshaft of your GX21 engine plays a crucial role in supplying the fuel-air mixture to the combustion chamber Page 9	With the crankshaft you have the second component of your GX21 power unit. In this session, you will fit it in place in the two ball bearings in the crankcase Page 13
66	In 1964, the French technology group Mantra expanded its range of activities to include the automotive industry. In 1968, having achieved success in F3 and F2, it set out to become a major player in Formula 1 Page 3	CAR TECH > The heart of your RB7 racer's two-stroke engine consists of the cylinder liner and the piston inside it. Together, they control the induction, compression and ignition of the fuel-air mixture Page 7	In this session, you attach your GX21 engine's piston and conrod assembly to the crankshaft, and then insert the cylinder liner into the crankcase Page 11
67	In 1966, at the age of 40, Jack Brabham won his third drivers' title — driving for his own team Page 3 CIRCUITS > On the North Sea coast, not far from Amsterdam lies the legendary GP circuit of Zandvoort Page 7	CAR TECH > As a precision mechanical device, the GX21 engine of your RB7 racer requires proper care and maintenance. We explain the best way of protecting this miniature power unit from corrosion Page 9	You will now be fitting your GX21 engine's cylinder head which serves several purposes. It seals the top of the combustion chamber, it holds the glow plug, and its fins provide additional cooling for the engine Page 11
68	The 1965 Formula 1 season, which was to be the last for the 1.5-litre normally aspirated engines, was dominated by Colin Chapman 's superb Lotus team and its brilliant Scottish driver, Jim Clark Page 3	CAR TECH > We take a look at the retractor mechanism of your GX21 engine's recoil starter. This device ensures that the starter cord is automatically wound back into its case after being pulled Page 9	Begin building your model's recoil starter by fitting the rear plate to the back of the engine crankcase and then connecting the starter shaft to the crankshaft Page 11
69	There is a world of difference between the sparse measures that were taken to make circuits safe for drivers and spectators in the early years of Formula 1 and the precautions that are required today Page 3	CAR TECH > Looking at the recoil starter, What at first glance looks like a conventional roller bearing proves on closer examination to be a sophisticated looking device — a one-way bearing Page 9	In this session, you will finish building your models recoil starter mechanism and then fit it into place on the rear plate of the engine's crankcase Page 11
70	In one of the most exciting seasons in F1 history, Ferrari driver John Surtees triumphed against strong competition from Lotus and BRM, thanks to his consistent performance, team orders and the oddities of the scoring system Page 3	CAR TECH > The carburettor supplies the engine with the mixture of fuel and air on which it runs. Here's an overview of the main components of your GX21 engine's carb and its basic settings Page 7	In this session, you will fit the carburettor to the inlet opening on the front of your engine's crankcase, using a rubber O—ring to seal the joint and locking the carb in place with its attaching screw Page 13
71	Lotus driver Jim Clark won seven of the 10 championship grands prix in 1963, beating closest rival Graham Hill by 25 points to take the first of his two drivers' titles and earn his team the constructors' honours Page 3	CAR TECH > In the engine of your RB7 racer, the fuel-air mixture is ignited by the glow plug, which has to be pre-heated by passing an electric current through it. The device that supplies the current is the glow starter Page 9	In this session, you will fit a glow plug into the centre of the engines cylinder head. The glow plug and its washer will seal the combustion chamber, and when the engine is running, the plug will ignite the fuel-air mixture Page 13
72	In one of the most exciting seasons in F1 history, Ferrari driver John Surtees triumphed against strong competition from Lotus and BRM, thanks to his consistent performance, team orders and the oddities of the scoring system Page 3	CAR TECH > The carburettor supplies the engine with the mixture of fuel and air on which it runs. Here's an overview of the main components of your GX21 engine's carb and its basic settings Page 7	In this session, you will fit the carburettor to the inlet opening on the front of your engine's crankcase, using a rubber O—ring to seal the joint and locking the carb in place with its attaching screw Page 13
73	The outcomes of the 1962 championships were decided in the final race of the season, when Jim Clark's oil leak helped Graham Hill and BRM to take the honours Page 3 TECHNOLOGY > An F1 team can have anywhere from under 200 staff to more than 800 Page 7	CAR TECH > The wheel rims of RC model cars can be both functional and decorative Page 11 CAR TECH > The flywheel wrench is a tool that you will need when assembling the transmission Page 13	
74	With its first rear-engined F1 car, in 1961, the Ferrari team managed to win both titles again Page 3 TEAM PORTRAIT > After winning two titles with Cooper, Aussie driver Jack Brabham started his own team Page 7	CAR TIPS > When the slot or socket of a screw head is damaged, the screw can no longer be turned in the usual way. Here are a few tried and tested methods with which you can resolve this problem Page 11	In this session, you will begin the final assembly stages of your GX21 engine by fitting the flywheel onto the end of the crankshaft Page 13
75	In the 1950s, Formula 1's first decade, numerous changes in the regulations — in particular, the changing restrictions on engine capacity — helped to drive the technical development of the cars Page 3	CAR TECH > A first look at the main components of the clutch and their function Page 9 CAR TIPS > How to replace a worn or damaged clutch spring Page 11	In this issue, you begin assembling your model RB7's clutch mechanism by fitting the clutch shoes to the flywheel and then adding the clutch shim and bearing Page 13
76	Jack Brabham's title success with Cooper in 1959 might have been a matter of luck, but in the 1960 season, the Australian made it clear to the disbelievers that the future of Formula 1 cars lay with the rear engine Page 3	CAR TECH > The clutch of your RB7 Racer transmits the power of the engine to the drivetrain, but the power must be delivered only when the accelerator is pressed. Find out more about the function of this assembly Page 7	Fit the clutch bell supplied with this issue to complete the clutch mechanism of your model Page 13

77	The very fast Silverstone Circuit, created on a former military airfield, was home to F1's first championship grand prix, in 1950. It has since hosted the British GP nearly 50 times, and is contracted to do so until 2027 Page 3	CAR TECH > The muffler system of a two-stroke engine, such as your model's GX21, not only expels the exhaust gases and reduces the noise, it also helps to compress the fuel-air mixture in the combustion chamber Page 5	Complete the main build of your RB7's GX21 engine by fitting its ore-assembled muffler system, and then mount it onto the car's chassis Page 7
78	In 1959, a car with a rear-mounted engine won the F1 constructors' championship for the first time. During what had proved to be an exciting season, Jack Brabham and his team, Cooper, had secured both titles Page 3	CAR TECH > Particles of dust and dirt in the fuel-air mixture will not only affect the GX21 engine's performance, they can also damage its piston and cylinder liner. The air filter ensures that this does not happen Page 7	In this session, you assemble the engine's air filter and mount it within the driver's helmet. Then you apply the detailing stickers to the helmet and attach the completed assembly to the engine Page 9
79	The 1958 Formula 1 season was overshadowed by a number of tragic deaths Page 3 TECHNOLOGY > The clutch and gearbox of an F1 car are precise, light and very tough Page 7	CAR TIPS > The air filter of your model's GX21 engine must be cleaned regularly. Here's how Page 9 CAR TECH > The RC power switch is the on/off control for your model's RC receiver Page 11	In this assembly session, you attach the RC power switch to your RB7's right chassis plate Page 13
80	In 1969, encouraged by having won seven motorcycle championships and a Formula 1 drivers' title, the British racing legend John Surtees started his own team. But its success was to be limited Page 3	CAR TECH > The RC system of your RB7 racer is powered by batteries. If you would prefer to use rechargeables rather than disposables, you will need to know what kind of charger to buy Page 7	The battery box supplied with this issue takes four AA batteries. The resulting voltage of 6V (with disposables) or 4.8V (with rechargeables) powers the radio control system of your RB7 model Page 11
81	After Juan Manuel Fangio left Ferrari for Maserati in 1957, many doubted that the four-times World champion could triumph again. But the Argentinian ace made few mistakes, and won the drivers' title for a record fifth time Page 3	CAR TECH > A brief overview of the components of the remote control system and its operation Page 7 CAR TECH > The different fuel blends that are used in nitro-engined RC cars Page 9	The servo that you received with this issue controls the throttle and brake levers on your model RB7. It will be mounted on the right side of the chassis Page 11
82	Cooper successfully introduced the rear-engine layout to F1 and scored its first victory with it in 1958 Page 3 TECHNOLOGY > The acceleration, braking and cornering forces of an F1 car make life tough for the driver Page 7	CAR TRACK > Using a fuel bottle or fuel gun allows for fast and precise refuelling. In addition, the use of a proper fuel bottle or gun is essential if you want to refuel safely, whether at home or at the track Page 9	In this assembly session, you mount the fuel tank onto the chassis of your RB7 and then connect it to the carburettor, ready for use Page 11
83	In 1956, the cards in the Formula 1 pack were reshuffled after the withdrawal of Lancia and Mercedes. Ferrari seized its chance, buying the Lancia cars and signing up star Mercedes driver Juan Manuel Fangio Page 3	CAR TECH > The commands that control RC models are transmitted in a similar way to radio and television programs To avoid interference, RC drivers must set up their radio control systems correctly before using them Page 7	In this session, you will fit an improved handle to your GX21 engines recoil starter and then install the RC box, which is mounted on the chassis and will house the battery box and the RC receiver Page 9
84	Launched in 1978, the Arrows GP team managed to survive until 2002, despite its notable lack of success Page 3 CIRCUITS > Berlin's unique AVUS circuit consisted of two long straights linked by a pair of hairpin turns Page 7	CAR TECH > Before you start running your RB7 racer, take the time to become thoroughly familiar with all the functions of your remote control unit — the Kyosho Syncro KT-200 transmitter Page 9	In this assembly session, you test-fit the front body and nose, the first parts that will make up your Red Bull Racing RB7's display body Page 13
85	CIRCUITS > The circuit at Zolder, in Belgium, hosted its first F1 championship race in 1973, and the Canadian driver Gilles Villeneuve lost his life there when he crashed during qualifying for the 1982 Belgian GP Page 3	CAR TECH > Radio waves transmit the commands of the remote control to the model. This overview shows how the process works and the various transmission methods that are used Page 5	In this session, you complete the nose and front wing assembly by adding the front wing stays to the lower nose and mounting it onto the wing. Then you add the camera, the nose tip and the upper nose Page 9
86	In 1955, reigning champion Juan Manuel Fangio went on the attack from the very first race, determined to retain his title in the face of fierce competition from drivers such as Alberto Ascari and Stirling Moss Page 3	CAR TECH > Here's an overview of the features and operation of the KR-200 2.4GHz remote control receiver that is supplied to subscribers along with the Kyosho Syncro transmitter Page 7	The movements of the throttle and brake servo are transmitted by rods to the carburettor and the brake mechanism. In this Assembly Guide, we show you how to fit these linkages to your RB7 Page 9
87	In the 1950s and 1960s, anyone who sat behind the wheel of an F1 racing car had to be extremely brave or extremely foolish, or both, because driver safety was not at that time seen to be very important Page 3	CAR TECH > The throttle, brake and steering of your RB7 racer are operated by the servos via three connecting rods. Proper adjustment of the servos and the rods is essential for precise control of your model Page 9	Using the two ball end that were supplied with Issue 86, you can extend the length of your models front shock absorbers to bring it up to racing specification Page 13
88	Mercedes-Benz entered Formula 1 in 1954 in sensational style, as Argentine ace Juan Manuel Fangio drove its now legendary W196 car to victory in its first race and went on to end the season with the drivers' title Page 3	CAR TECH > The components of your RB7 racer's display body must be bonded together with suitable adhesives. Here are a few tips on the glues to use and how to avoid causing any damage to the detailed finish of your car Page 7	With this issue, you have received more parts of your RB7's display body. When you have fitted them together, they will be ready to be mounted onto your model Page 9
89	Mercedes-Benz made a dramatic return to Formula 1 in 1954, with its awesome W196 cars and a driver line-up that included the great Juan Manuel Fangio Page 3 CIRCUITS > The Estoril circuit hosted the Portuguese Grand Prix from 1984 to 1996 Page 7	CAR TIPS > Cutting, trimming and drilling the Lexan running bodywork of your RB7 racer calls for good working techniques and a steady hand Page 9	With the addition of the two underbody halves, the display body of your RB7 racer continues to take shape. Here's how to fix the parts correctly in place Page 13
90	The 1953 F1 season was the second and last to be run under Formula 2 rules. Ferrari and its top driver, defending champion Alberto Ascari, again came out on top, despite a strong challenge from Maserati Page 3	CAR TECH > Before you start your RB7 model's engine for the first time, it's worth learning now to replace the starter cord in case you accidentally break it by pulling it too hard or tugging it out too far Page 9	Your model's display body features an air induction (intake) pool, set behind and above the driver's helmet. On the real RB7, this pool channels air to the engine Page 11
91	BRM - the British Racing Motors team — was founded in the 1940s and competed in Formula 1 from 1951 to 1977. Its most successful period was the early 1960s Page 3	CAR TRACK > Your RB7 RC racer is now ready to be started up for the first time. Here's now to bring its GX21 engine to life and run it in as gently and effectively as possible, and how to bring it gradually up to speed Page 7	Fit the left and right upper sections to your RB7's display body. These make up the engine cover, which forms the upper rear part of the model's bodywork Page 13
92	Alfa Romeo was never able to repeat the success that it had enjoyed in Formula 1's early years Page 3 TECHNOLOGY > The cooling systems are some of the most important components of a Formula 1 car Page 7	CAR TRACK > Before you take your RB7 racer out on the track, you should familiarise yourself with some basic driving manoeuvres. Learn to control your model gradually, taking it one step at a time and driving slowly to start with Page 9	Finish and assemble the left and right turning vanes and bargeboards — important aerodynamic features of the real RB7 — then fit them to your RB7's chassis Page 11
93	In 1952, the still-young Formula 1 saw its first major shake-up: its top team, Alfa Romeo, had withdrawn from the sport, and the FIA declared that the F1 world championship would now be run under Formula 2 rules Page 3		In this session, you fit the mirrors and steering wheel to your RB7's display body and then add the front wing assembly from Issue 88 Page 9
94	Inspired by its achievements in Formula 2, the Minardi team made its debut in Formula 1 in 1985. Despite a conspicuous lack of success, the team survived until 2005 and was then transformed into Scuderia Toro Rosso Page 3	CAR TRACK > How to develop your RC car driving skills by using a figure-of-eight track, which will help you to improve your cornering technique and allow you to experiment with different steering settings Page 7	In this assembly session, you prepare and paint several detail pieces for your RB7's display body, including the mirrors, top camera, rear light and drivers arms, and then mount them all onto your model Page 9 SEE UPDATE FROM ISSUE 98 RE DECALS & PAINT

95	After winning the world championship the previous year, the Alfa Romeo team started as favourites again in 1951. But the rival Ferraris were so good that at the end of the season, Juan Manuel Fangio only just managed to beat them Page 3	CAR TECH > To make your model look like Mark Webber's RB7, you have to paint the transparent Lexan running body to match the original. Here's how to give your model this distinctive appearance Page 7	In this issue, you will be Working on the running body of your car for the first time. First, you will make holes for the engine, antenna and body supports, then you will trim the body to achieve the correct outline Page 11
96	The Italian car maker Lancia entered its own Works team in Formula 1 in 1954 and 1955 Page 3 TECHNOLOGY > Fireproof materials play an important role in the race clothing of a Formula 1 driver Page 7		Assemble the front wing of your RB7's running body, then decorate the wing with sponsor stickers to recreate the look of the real car Page 9
97	In 1950, five years after the end of World War II, the Formula 1 world championship was launched. It was the start of a new era in motor racing Page 3 CIRCUITS > The first F1 circuit behind the Iron Curtain was the Hungaroring, opened in 1986 Page 7		In this session, the rear wing for your RB7's running body takes shape. When you've assembled the wing and decorated it with official sponsor stickers, it will be ready to be mounted onto the running body Page 9
98	The original March team made its Formula 1 debut in 1970, but it failed to realise its true potential and was closed down after the 1977 season Page 3 CIRCUITS > The scenic Watkins Glen circuit in upstate New York hosted F1 racing from 1961 to 1980 Page 7		Begin preparing your model RB7 for racing by mounting the running body lower nose onto the chassis, ready to take the front wing, and then fitting the rear wing Page 9
99	Success as a driver in Formula 3 encouraged English engineer Mo Nunn to build his own racing cars. His team, Ensign Racing, entered Formula 1 for the first time in 1973, and struggled hard for success until finally conceding defeat at the end of the 1982 season Page 3		Continue assembling the running body of your model RB7 by adding a number of important features, including bargeboards, turning vanes and other small aerodynamic components Page 7
100	In 1904, the first national automobile clubs from Europe and the USA joined together to form an umbrella organisation that would encourage the development of motor racing. The result was the establishment of the AIACR, a precursor of today's FIA Page 3		In this final session, you apply the sponsors' logo stickers and decals to your RB7's running and display bodies so that they look just like the bodywork of the real car. You can then mount the body of your choice onto the chassis, and your model RB7 will be complete Page 7
101	Having competed in 326 Formula 1 GPs, the Ligier team is ranked among the top ten of all participants in the senior category of motor racing. Its greatest success was to finish second in the 1980 constructors' championship Page 3 TECHNOLOGY > Red Bull Racing joined forces with engine supplier Renault for the 2007 season. The Renault engine was the RS27, a 2.4-litre V8 that was to power every Red Bull Racing car from 2007 to 2013 Page 7		In this session, you will fit the first of your medium-compound rear tyres to its wheel, then acid the OZ Racing stickers that will give the wheel an authentic appearance Page 12
102	Almost since the birth of the automobile, motor racing has enjoyed great popularity, and the technical development of the car has been stimulated and often led by the demands of motorsports Page 3 TECHNOLOGY > With the 2014 Formula 1 season came some radical technical changes as the conventional engines were replaced by turbocharged hybrid power units with kinetic and heat energy recovery systems Page 9		In this session, you will fit the second of your medium-compound rear tyres to its wheel and add the OZ Racing stickers Page 12
103	Because of a change in the safety regulations, many cars had unusual stepped noses for the 2012 season Page 3 Four different winners in the first four races — the start of the 2012 Formula 1 season suggested that there would be a very exciting contest for the championship Page 7	CAR TRACK > Safety is a prime concern in RC model car racing. To ensure that nothing spoils the fun when your RB7 racer is on the circuit, you should go through a checklist of important points before each outing Page 11	Now that you've fitted the 'second set of rear wheels for your RB7 with the slightly harder medium compound tyres, you can begin fitting medium tyres to your second set of front wheels Page 13
104	After the first four races of the 2012 season had four different winners, Formula 1 fans awaited the outcome of the first Grand Prix on European soil with keen anticipation Page 3	CAR TECH > Three sets of racing tyres of different degrees of hardness — super soft, soft and medium — are available for your RB7. Here are the basic rules for choosing which compound to use Page 9	Assemble the second of your RB7's alternative front wheel and medium-compound tyre sets, then fit the front and rear medium tyre sets to your model Page 11
105	After nine races of the 2012 season, no clear world championship favourite had emerged. Although the McLaren drivers were back on form, this seemed not to worry reigning champion Sebastian Vettel Page 3		Begin the process of fitting your RB7 with its two-speed gearbox by removing some of the existing transmission components Page 9
106	After the European races of the 2012 season, defending champion Sebastian Vettel was lying fourth in the rankings, 39 points behind leader Fernando Alonso, but a winning run in Asia brought him back into contention Page 3	CAR TECH > The extension kit for your RB7 racer is a two-speed gearbox that will give better acceleration from a standstill and a higher top speed. Its technology is simple but effective Page 9	Before you can fit your new two-speed gearbox, you have to remove the spur gear assembly from the existing gearbox. This work includes dismantling the disc brake, which you will re-use with the new gearbox Page 11
107	Sebastian Vettel had to wait until the final race of a thrilling season to clinch his third drivers' title Page 3 TECHNOLOGY > An in-depth look at the Red Bull Racing RB8, the winning car of the 2012 season Page 7		In this session, you remove more components to make way for the installation of the two-speed gearbox, then assemble the first parts of the gearbox itself Page 11
108	In 2018, three-times world champion Sebastian Vettel's performance in Jore-season testing was watched with interest Page 3 After a hesitant start to the 2013 season, the infinity Red Bull Racing team soon became increasingly dominant Page 7		In this session, you remove the engine from the chassis of your RB7, which will then be ready to have its new two-speed gearbox installed Page 11
109	The first European race of the 2013 season was the Spanish Grand Prix at the Circuit de Catalunya, Barcelona, where a home victory for Fernando Alonso fuelled Ferrari's hopes of winning another championship Page 3		Now that you've dismantled and removed your RB7's existing single-speed gearbox, it's time to complete the assembly of your two-speed upgrade. Your new gearbox will then be ready for installation Page 9
110	The leading teams started the second half of the season with great optimism, but, after the German Grand Prix, it was obvious that Sebastian Vettel and his RB9 were going to be a very hard combination to beat Page 3		In this session, you remove the existing clutch from your RB7's engine and replace it with the new one, designed for use with the two-speed gearbox Page 9

111	The outcome of the 2013 world championship was decided before the end of the season, in the four Asian grands prix in Singapore, Korea, Japan and India. Sebastian Vettel won all of them to claim his fourth drivers' title Page 3		In this session, you complete your two-speed transmission by adding the clutch bell, and then fit the engine assembly back onto your RB7's chassis Page 9
112	The last three races of 2013 were something of an anticlimax, as both titles had already been decided. But for Mark Webber, they were to be his final races in Formula 1, and for Sebastian Vettel, there were still records to be broken Page 3		In this session, you continue to reassemble your model by refitting the throttle and brake linkages and the gearbox cover, and reconnecting the fuel lines Page 9
113	None of its predecessors had dominated the competition in Formula 1 as much as the RB9 did in the 2013 season. Here's a summary of the car's successes and some of the factors contributing to its superiority Page 3		In this session, you finish putting your RB7 back together by refitting the RC box, antenna, air filter and running body. The reassembly of your model, now equipped with a two-speed gearbox, will then be complete Page 9
114	A radical change in the regulations brought highly complex turbocharged hybrid engines into Formula 1 Page 3 TECHNOLOGY > The carbon fibre brakes of a Formula 1 car are subjected to enormous mechanical and thermal stresses Page 9		Begin fitting your RB7 with its set of supersoft tyres, using the rear tyres and wheels that were supplied with the previous two issues Page 11
115	From Formula 1 to touring cars and motorbike racing, through soccer and ice hockey to air racing, caving and cliff diving, the Red Bull sports empire spans the globe and embraces a huge range of disciplines Page 3 CIRCUITS > The Sepang circuit, home of the Malaysian Grand Prix, is modern and spectator-friendly Page 9		In this final assembly session, you fit the two front supersoft tyres and their wheels to your RB7. After that, your model will be complete and ready for use Page 11

RB7 Build Sheet

ISSUE No.	ASSEMBLY CHECK LIST	DONE	
1	Begin the assembly of your realistically detailed Red Bull Racing RB7 model by fitting together the lower and central parts of the front wing, along with its left and right base plates - Page 13	✓	WINGS
2	Continue putting together the components of the front wing, then assemble the components for the rear wing of your Red Bull Racing RB7 model - Page 11		
3	Aerodynamic add-ons give the front wing some finishing touches. In addition, you get the first wheel for your model - Page 11		
4	After assembling the front and rear wings, we begin to assemble the chassis, starting with the assembly of the first shock absorber for your model - Page 11		C&S
5	Add the logo stickers to finish off the assembly of your model's front wing - Page 11		WINGS
6	This issue includes the first part of your model's main chassis, and instructions for adding the logo stickers to the rear wing of the car - Page 11		
7	This issue includes the left front tyre for your model RB7. It comes complete with its foam insert so that it's ready to be fitted to the wheel - Page 11		WHEEL
8	Begin the assembly work on your RB7's front suspension starting with the lower wishbones, then add some more stickers to the rear wing - Page 11		CHASSIS & SUSPENSION
9	Begin assembling the chassis of your Red Bull Racing RB7. In the first step you will be attaching the lower wishbones to the lower front part of the chassis. PLUS: Add more stickers to the rear wing - Page 11		
10	This issue includes a wheel and the right front tyre for your model RB7. The tyre comes complete with its foam insert so that it's ready to be fitted to the wheel - Page 13		WHEEL
11	In this issue, you add the finishing touches to the right front wheel and begin the assembly of your model's steering mechanism - Page 11		CHASSIS & SUSPENSION
12	In this issue, you assemble the steering crank of your RB7 and prepare the front lower chassis by fitting four spacers that will support the front upper chassis Page 11		
13	This issue, you will fit the front upper chassis and the front pushrod mount to the front lower chassis assembly of your model RB7 Page 11		
14	Continue assembling your model's front suspension system by fitting the front left upper wishbone onto the upper front chassis Page 11		
15	The assembly of your model's front suspension system continues with the fitting of the front right upper wishbone onto the upper front chassis Page 11		
16	In this issue, you will be fitting the steering servo to the front chassis assembly of your RB7 racer Page 13		
17	Continue assembling the chassis of your RB7 racer by fitting the front bulkhead and adding the lower part of the nose section Page 11		
18	Connect the steering rod of your Red Bull RB7 to the steering linkage, then mount the front upper wishbones onto the front chassis Page 11		

19	This issue includes a model of Mark Webber's racing helmet and the decals that replicate its livery. When these have been applied, you can display the helmet alongside your model RB7 racer Page 11	BODY
20	Assemble the servo saver and fit it into place on the output shaft of your model's steering Servo Page 11	CHASSIS & SUSPENSION
21	In this assembly guide you will attach the front shock mount to the front upper chassis of your car. The front shock of your RB7 will be attached to this assembly Page 11	CHASSIS & SUSPENSION
22	In this assembly guide you will fit the left front pushrod, a key part of your car's suspension Page 11	CHASSIS & SUSPENSION
23	In this issue, you fit the front left axle into the knuckle arm, then attach this assembly to the upper and lower front left wishbones Page 11	CHASSIS & SUSPENSION
24	In this assembly session we will fit the In this assembly session we will fit the wheel bearings to the left front wheel of your RB7 racer. The wheel will then be able to rotate with a minimum of friction Page 13	WHEEL
25	After the left front suspension, it is now the turn of the front suspension on the right. In this assembly guide, you will be fitting a pushrod that connects the wishbone and the front chassis Page 11	CHASSIS & SUSPENSION
26	This time, you will assemble your RB7's second shock absorber and improve the performance of the first by fitting an additional washer, supplied with this issue. Then you will fit the pair of shocks to the front chassis Page 7	CHASSIS & SUSPENSION
27	Finish assembling the right front suspension with the right upright and the right wheel axle. As the shocks are already attached, the suspension of the front chassis will then be complete Page 11	CHASSIS & SUSPENSION
28	The two ball bearings supplied with this issue are for the right front wheel of your RB7 racer Page 13	WHEEL
29	Fit the two lower nose air fences and complete the steering assembly by joining together the two track rods, adjusting them and attaching them to the front chassis Page 11	CHASSIS & SUSPENSION
30	In this session, you will attach the front chassis assembly and the left and right bargeboard stays to the main chassis of your RB7 racer Page 11	CHASSIS & SUSPENSION
31	This time, you will fit the two chassis sides to the main chassis plate, which will complete the assembly of the central section of your car's base Page 11	CHASSIS & SUSPENSION
32	In this issue, you will fit the rear diffuser to the floor pan of your RB7 racer. In a later issue, it will be connected to the upper rear bulkhead Page 11	CHASSIS & SUSPENSION
33	This time, you will fit the tail light mount onto the rear diffuser of your model Red Bull Page 11	CHASSIS & SUSPENSION
34	With the installation of the rear bulkhead, you will complete the chassis floor of your RB7 and your car will be ready for installation of the rear suspension Page 11	CHASSIS & SUSPENSION
35	Now it's time to start assembling your RB7's rear suspension. In this issue, you will work on the lower left rear wishbone, then fit it to the rear of the chassis Page 11	CHASSIS & SUSPENSION
36	In this issue, you will continue assembling and fitting the rear suspension to your RB7 racer Page 11	CHASSIS & SUSPENSION
37	The differential assembly is a key component of your model's drivetrain. In this issue, you will put together the first components of this assembly and fit the left diff shaft Page 11	DIFFERENTIAL
38	In this issue, you will continue working on the differential by fitting the bevel gears and the bevel shaft. You will also pack the assembly with grease Page 11	DIFFERENTIAL
39	In this session, you will complete the assembly of your RB7 racer's differential. It will then be ready to be mounted on the model's lower rear bulkhead Page 11	DIFFERENTIAL
40	The drive bevel gear is a key component of your RB7 racer's transmission. In this issue, you will fit it into the differential case and engage it with the diff ring gear Page 13	DIFFERENTIAL
41	Continue building your model RB7 racer by completing the differential assembly and then fixing the upper rear bulkhead into position Page 11	CHASSIS & SUSPENSION
42	In this assembly guide, you will assemble your RB7 racer's rear shock absorber mount and then fix it onto the top of the car's rear bulkhead Page 11	CHASSIS & SUSPENSION
43	Continue assembling your RB7 racer's rear suspension by fitting the left upper rear wishbone Page 11	CHASSIS & SUSPENSION
44	In this assembly guide, you will continue building up your RB7 racer's rear suspension by fitting the right upper rear wishbone Page 11	CHASSIS & SUSPENSION
45	The left rear hub carrier provides the link between the upper and lower rear wishbones on the left-hand side of your RB7 model racer Page 11	CHASSIS & SUSPENSION
46	In this Assembly Guide, you will fit the left rear wheel shaft of your RB7 into the rear left hub carrier that you assembled in the previous issue Page 11	CHASSIS & SUSPENSION
47	In this Assembly Guide, you will fit your RB7's left rear driveshaft, which transmits engine power from the differential to the left rear wheel shaft and thus to the left rear wheel Page 13	CHASSIS & SUSPENSION
48	Apart from a transparent spacer ring, the two rear shock absorbers on your RB7 are identical to those at the front. In this issue, you fit and adjust the first of them Page 11	CHASSIS & SUSPENSION
49	From working on the chassis of your RB7 racer, you now turn your attention to its aerodynamics by completing the assembly of the rear wing Page 11	WINGS
50	The right rear hub carrier provides the link between the upper and lower rear wishbones on the right-hand side of your RB7 model racer Page 11	CHASSIS & SUSPENSION
51	In this Assembly Guide, you will fit the right rear wheel shaft of your RB7 into the right rear hub carrier that you assembled in the previous issue Page 11	CHASSIS & SUSPENSION

Build Check Sheet

52	In this issue, you will fit your RB7's right rear driveshaft, which transmits engine power from the differential to the right rear Wheel shaft and thus to the right rear wheel Page 13		CHASSIS
53	Take another step towards the completion of your model's rear end by fitting the left rear tyre to its wheel Page 11		WHEEL
54	In this issue, you will assemble the second of your RB7's two rear shock absorbers, then fit them both into place on the chassis Page 7		C&S
55	The main shaft is the first of a series of drive shafts that transmit the power efficiently from your RB7's engine to its rear wheels Page 13		DRIVE TRAIN
56	The gearbox spur gear transmits the rotation of the engine pinion to the main shaft of the drivetrain, via a pin that locks the gear to the shaft. In this issue, you assemble the gear and mount it on the shaft Page 11		
57	Continue building up your RB7 racers transmission system by adding a cup joint and bail bearing to the end of the main shaft and spur gear assembly, which you but together in the last issue Page 11		
58	In this issue, you begin assembling your RB7 racer's braking system by putting the brake rotor onto the gearbox output shaft, and then fit the the throttle servo mounts onto the chassis Page 11		
59	The engine mount supplied with this issue is screwed to the chassis to make a solid, heat-resistant base for your model's power plant Page 11		
60	In this issue, you will fix the centre differential housings to the chassis and install the main shaft of the transmission, then assemble the brake callipers and pads Page 9		
61	The brake cam and brake rod complete the disc brake of your RC racer. In this session, you will add these components to the brake, then fit the assembly in place on the chassis, together with the gearbox cover Page 7		
62	In this session, you will assemble the central section of your RB7 racers drivetrain so that it is ready to be fitted to the chassis in the next issue Page 11		
63	In this session, you connect the two driveshafts to the driveshaft mount assembly from the previous issue and to the front and rear differentials Page 9		
64	With this issue, you have received the crankcase of the GX21 engine for your RB7 racer. In coming issues, you will fit the crankshaft and piston into this precisely manufactured die-cast block and add the cylinder head Page 13		
65	With the crankshaft you have the second component of your GX21 power unit. In this session, you will fit it in place in the two ball bearings in the crankcase Page 13		
66	In this session, you attach your GX21 engine's piston and conrod assembly to the crankshaft, and then insert the cylinder liner into the crankcase Page 11		
67	You will now be fitting your GX21 engine's cylinder head which serves several purposes. It seals the top of the combustion chamber, it holds the glow plug, and its fins provide additional cooling for the engine Page 11		
68	Begin building your model's recoil starter by fitting the rear plate to the back of the engine crankcase and then connecting the starter shaft to the crankshaft Page 11		
69	In this session, you will finish building your models recoil starter mechanism and then fit it into place on the rear plate of the engine's crankcase Page 11		
70	In this session, you will fit the carburettor to the inlet opening on the front of your engine's crankcase, using a rubber O—ring to seal the joint and locking the carb in place with its attaching screw Page 13		
71	In this session, you will fit a glow plug into the centre of the engines cylinder head. The glow plug and its washer will seal the combustion chamber, and when the engine is running, the plug will ignite the fuel-air mixture Page 13		
72	The components supplied with this issue are the right rear wheel and its tyre. When you have fitted the tyre to the wheel, you will mount them and the left rear wheel onto your RB7's chassis, which will then have its complete set of wheels Page 11		WHEEL
73	SUPPLY OF FLYWHEEL WRENCH		
74	In this session, you will begin the final assembly stages of your GX21 engine by fitting the flywheel onto the end of the crankshaft Page 13		MOTOR, STARTER, CARBURETTOR, AIR FILTER
75	In this issue, you begin assembling your model RB7's clutch mechanism by fitting the clutch shoes to the flywheel and then adding the clutch shim and bearing Page 13		
76	Fit the clutch bell supplied with this issue to complete the clutch mechanism of your model Page 13		
77	Complete the main build of your RB7's GX21 engine by fitting its ore-assembled muffler system, and then mount it onto the car's chassis Page 7		
78	In this session, you assemble the engine's air filter and mount it within the driver's helmet. Then you apply the detailing stickers to the helmet and attach the completed assembly to the engine Page 9		ELECTRICS
79	In this assembly session, you attach the RC power switch o your RB7's right chassis plate Page 13		
80	The battery box supplied with this issue takes four AA batteries. The resulting voltage of 6V (with disposables) or 4.8V (with rechargeables) powers the radio control system of your RB7 model Page 11		
81	The servo that you received with this issue controls the throttle and brake levers on your model RB7. It will be mounted on the right side of the chassis Page 11		DR
82	In this assembly session, you mount the fuel tank onto the chassis of your RB7 and then connect it to the carburettor, ready for use Page 11		

Build Check Sheet

83	In this session, you will fit an improved handle to your GX21 engines recoil starter and then install the RC box, which is mounted on the chassis and will house the battery box and the RC receiver Page 9		MOT
84	In this assembly session, you test-fit the front body and nose, the first parts that will make up your Red Bull Racing RB7's display body Page 13		BODY
85	In this session, you complete the nose and front wing assembly by adding the front wing stays to the lower nose and mounting it onto the wing. Then you add the camera, the nose tip and the upper nose Page 9		
86	The movements of the throttle and brake servo are transmitted by rods to the carburettor and the brake mechanism. In this Assembly Guide, we show you how to fit these linkages to your RB7 Page 9		MOTOR
87	Using the two ball end that were supplied with Issue 86, you can extend the length of your model's front shock absorbers to bring it up to racing specification Page 13		C&S
88	With this issue, you have received more parts of your RB7's display body. When you have fitted them together, they will be ready to be mounted onto your model Page 9		BODY
89	With the addition of the two underbody halves, the display body of your RB7 racer continues to take shape. Here's how to fix the parts correctly in place Page 13		
90	Your model's display body features an air induction (intake) pool, set behind and above the driver's helmet. On the real RB7, this pool channels air to the engine Page 11		
91	Fit the left and right upper sections to your RB7's display body. These make up the engine cover, which forms the upper rear part of the model's bodywork Page 13		
92	Finish and assemble the left and right turning vanes and bargeboards — important aerodynamic features of the real RB7 — then fit them to your RB7's chassis Page 11		
93	In this session, you fit the mirrors and steering wheel to your RB7's display body and then add the front wing assembly from Issue 88 Page 9		
94	In this assembly session, you prepare and paint several detail pieces for your RB7's display body, including the mirrors, top camera, rear light and drivers arms, and then mount them all onto your model Page 9 SEE UPDATE FROM ISSUE 98 RE DECALS & PAINT		
95	In this issue, you will be working on the running body of your car for the first time. First, you will make holes for the engine, antenna and body supports, then you will trim the body to achieve the correct outline Page 11		
96	Assemble the front wing of your RB7's running body, then decorate the wing with sponsor stickers to recreate the look of the real car Page 9		
97	In this session, the rear wing for your RB7's running body takes shape. When you've assembled the wing and decorated it with official sponsor stickers, it will be ready to be mounted onto the running body Page 9		
98	Begin preparing your model RB7 for racing by mounting the running body lower nose onto the chassis, ready to take the front wing, and then fitting the rear wing Page 9		BODY
99	Continue assembling the running body of your model RB7 by adding a number of important features, including bargeboards, turning vanes and other small aerodynamic components Page 7		
100	In this final session, you apply the sponsors' logo stickers and decals to your RB7's running and display bodies so that they look just like the bodywork of the real car. You can then mount the body of your choice onto the chassis, and your model RB7 will be complete Page 7		
101	In this session, you will fit the first of your medium-compound rear tyres to its wheel, then add the OZ Racing stickers that will give the wheel an authentic appearance Page 12		WHEEL
102	In this session, you will fit the second of your medium-compound rear tyres to its wheel and add the OZ Racing stickers Page 12		
103	Now that you've fitted the 'second set of rear wheels for your RB7 with the slightly harder medium compound tyres, you can begin fitting medium tyres to your second set of front wheels Page 13		
104	Assemble the second of your RB7's alternative front wheel and medium-compound tyre sets, then fit the front and rear medium tyre sets to your model Page 11		
105	Begin the process of fitting your RB7 with its two-speed gearbox by removing some of the existing transmission components Page 9		2 SPEED TRANSMISSION
106	Before you can fit your new two-speed gearbox, you have to remove the spur gear assembly from the existing gearbox. This work includes dismantling the disc brake, which you will re-use with the new gearbox Page 11		
107	In this session, you remove more components to make way for the installation of the two-speed gearbox, then assemble the first parts of the gearbox itself Page 11		
108	In this session, you remove the engine from the chassis of your RB7, which will then be ready to have its new two-speed gearbox installed Page 11		
109	Now that you've dismantled and removed your RB7's existing single-speed gearbox, it's time to complete the assembly of your two-speed upgrade. Your new gearbox will then be ready for installation Page 9		
110	In this session, you remove the existing clutch from your RB7's engine and replace it with the new one, designed for use with the two-speed gearbox Page 9		
111	In this session, you complete your two-speed transmission by adding the clutch bell, and then fit the engine assembly back onto your RB7's chassis Page 9		
112	In this session, you continue to reassemble your model by refitting the throttle and brake linkages and the gearbox cover, and reconnecting the fuel lines Page 9		

Build Check Sheet

113	In this session, you finish putting your RB7 back together by refitting the RC box, antenna, air filter and running body. The reassembly of your model, now equipped with a two-speed gearbox, will then be complete Page 9		WHEEL
114	Begin fitting your RB7 with its set of supersoft tyres, using the rear tyres and wheels that were supplied with the previous two issues Page 11		
115	In this final assembly session, you fit the two front supersoft tyres and their wheels to your RB7. After that, your model will be complete and ready for use Page 11		