

Kyosho Field Baja Beetle Review

Quite a Refreshing Change

What on earth is the Field Baja Beetle? A progressively backwards step! It's a 1:10 scale four wheel drive series Off-road car from Kyosho powered by a GS-11X engine with recoil start and fitted with the ever popular 60's Beetle body.

"SO WHAT?" You say, well, how about an i/c car that will go from full blast forwards to full blast in reverse using a standard two channel set without any fancy frills - beat that if you can!

A closer look will show a strong 2mm alloy chassis, fixed four wheel drive driven through a transfer gearbox to two diffs. Powerplant is the Kyosho GS-11X engine with a ready fitted centrifugal clutch. You will also see fully independent suspension fitted with oil filled shocks. Sounds pretty good, but if you are really sharp eyed you will not see a brake and wonder why not - the straight answer is it doesn't really need one - just hit reverse instead!

What you get

Open the attractive Baja box and you find a full and very complete kit that is clearly well up to the Kyosho legendary standard. It's a full kit

in that you build just about everything and just about everything you need is included. All you add is the radio and a tool kit that all existing modellers own or most households have anyway. If the household doesn't have what is needed then it should!

In one of the boxes you will find the GS-11X engine with recoil starter that already has a centrifugal clutch fitted. The flip top fuel tank is ready to fit and incorporates a simple priming pump. The exhaust is also included which is a simple expansion chamber plus an extension which takes all the goo out the back. The QRC (Quick Reverse Clutch) transfer gearbox is pre-assembled while the differentials need building as does the shocks and suspension etc.

A simple radio box is included which is water resistant rather than water proof (I've yet to see a 100% water proof box) which houses the Rx and battery and also includes the switch mount. Add to this lot the various sprues of mouldings and of course the clear lexan Beetle body shell and you have the kit. Oh did I mention the Instruction Manual, 24 pages of excellent diagrams on building, tools, and the radio required etc. Each diagram includes clear and concise written instructions (in Japanese, English, German, & French) which supplement the diagrams.

Just as it comes out of the box, the GS11X engine.



Putting it together

First job is to understand how the Instruction Manual works, an example is included! Each section shows you which numbered bag the parts are to be found in, it lists the nuts and bolts etc. required, shows you how to do the job and tells you how many of the units are needed. The only warning I would give is don't become too confident, the diagrams are so good that it's tempting not to bother reading the text - read it's there for very good reasons! Also take note of the various symbols in the sections, explanations of these are at the bottom of each page.

The shock absorbers are the first task - easy - no

problem, but note the pre-tensioning of the 'MacPherson' struts is adjustable so go for the middle point and make them all the same, you can play with different settings later on.

The clever QRC - Quick Reverse Clutch gearbox

Now let's look at the pre-assembled QRC transfer gearbox. This is the heart of the QRC series and is driven by the clutch transferring the drive via gears to the output

couplers to the two differentials. The box has to have the cooling fan attached and is then fitted to the chassis with self tapping screws.

Beware of the chassis, it is stamped from good quality 2mm hard aluminium but the stamping has left the edges pretty sharp. It's a good idea to run a flat file over them to prevent sliced fingers.

I was intrigued by the transfer gearbox because the thought of slamming flat out forwards to reverse sounded like a quick way to wreck the box. The box is surprisingly simple, the input shaft drives two gears, one of which drives another gear at

the bottom of the box. The second gear on the input shaft is smaller and drives a lay gear which in turn drives a second gear at the bottom of the box (this extra lay gear reverses the rotation of the next gear). So we now have two independent gears at the bottom of the box running on the output shaft but not driving it, both are permanently driven, one for forwards and the other for reverse. The output shaft is driven by a disc which has a metal peg through it and it slides between the two driven gears, engaging with one or

A quality paint job for a quality car, the paint scheme was taken from a full size bug.



Nice shocks.

The heart of the car, the Q.R.C. transmission, see text for details.

Gear diffs are fitted front and rear.



Quick Spec

4WD. Shaft Drive. Q.R.C. Gearbox. Twin Geared Diffs Bushed. Dog Bone Driveshafts. Pressed Alloy Chassis & Radio Plate. Kyosho GS11X Engine. Integral Pull-start. Centrifugal Clutch. Engine Driven Cooling Fan. Independent Suspension. Top Link Bottom & Wishbone Front & Rear. Oil Filled Coil Over Shock Absorbers. Dish Wheels. Kyosho Mini Pin Tyres.
Lexan VW Bodyshell.

Testers Kit

Transmitter:- Futaba Attack
Servos:- Futaba 3003/148
Receiver:- Futaba Attack
Fuel:- Model Technics Dyna Glow 10%
Glow Plug:- Model Technics F4
Tyres:- Kit
Bodyshell:- Kit

Paint by Puma.

Tears of Joy.

Pros

QRC Gearbox
Easy Build (very clear instructions)
High Quality
Smooth Handling (Good shock absorbers)
Very Strong
Easy To Drive
Simple To Set-up
Loads Of Fun
Amazing Sticker Set

Cons

Steering Servo Position (Water-proofing required)
No Ballraces
Lack Of Fuel Filter
Carb Very Sensitive To Adjustment
Engine Needs High Level Of Nitro For Strong Performance
Exhaust Strangles Engine

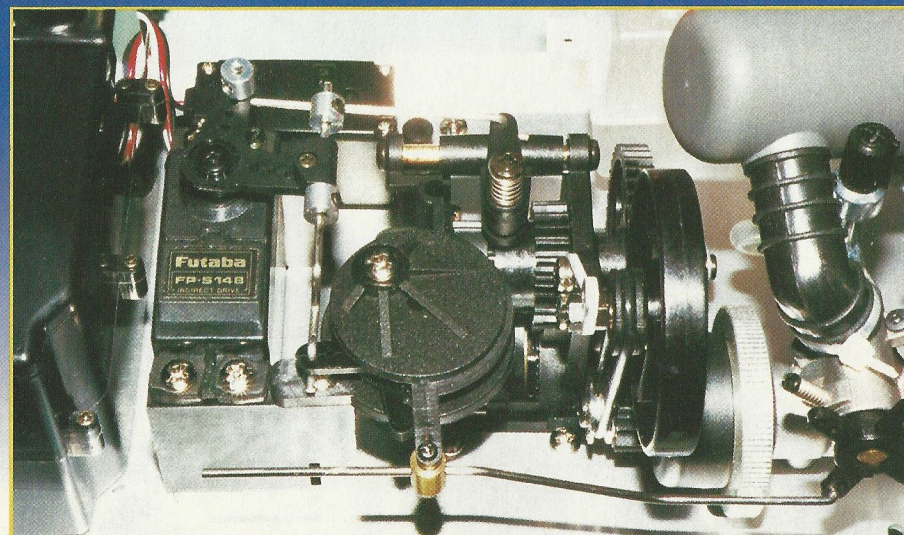
other. Each of the driven gears has a metal pin which engages with the disc peg and it's as simple as that, the disc slides across, the peg enters a groove running round the face of the gear until it meets the pin when the drive takes up. These two drive gears have four location places for the drive pin and so if one position wears, the box can be stripped and the pin relocated. Last to mention is that the disc is controlled by the throttle servo - more about that later!

The end result of this is that you have a very simple but durable gearbox which gives an almost instant gear shift between forward and reverse with reverse being a slightly lower gear ratio.

Differentials and axles

Plain bushes are used throughout the transmission, both in the QRC unit, the diffs and wheel hubs. The diffs themselves use aluminium cast crown and pinion gears mounted in a plastic

The "drum" in the picture allows the throttle to operate in the correct direction, with the transmitter stick in either forwards or reverse position, a very clever bit of kit.



casings and they are then built into the axles. These units need to be carefully assembled so they run as smooth as possible, but can be expected to take a while to run in.

Once the diffs are built the suspension is built up around the rear unit and at this stage you begin to appreciate the quality of the mouldings, it's superb, all that you need do is trim any flashing and the fit is perfect. 'Swingshafts' are used to connect the diff. couplers to the hubs which are a bit crude but very effective and help to keep the costs down. One point which also became clear at this stage was that not all the parts on the sprues are used! This made identifying the correct parts confusing at times which took a bit trial and error to be sure. The resulting back axle with the shocks attached is very strong with good suspension movement and is clearly designed to take a lot of use and abuse. Once this is finished off with the bumper bars and body supports, it is screwed to the chassis with 3 mm self tapping screws.

The front axle builds up in much the same way as the rear but of course includes the king pins etc. for the steering. Again plain bushes are used for the drive while the king pins run in the nylon hubs. A point to watch for is not to miss out the 'O' rings between the front diff. couplers and the drive shaft! A servo saver is built into the steering linkage rather than onto the servo itself, this saver uses a plastic 'C' clip which will safely protect plastic servo gears but, for higher

quality servos, could be a little too protective. The steering linkage uses a centre plate supported at either end which gives good support to the steering and keeps the track rods short. Again plastic bushes are used. This assembly is then bolted to the chassis with the whole front axle.

Engine and radio bits

The Kyosho GS-11X bolts straight onto the chassis but care is needed to set the back lash correctly between the clutch pinion gear and the QRC input gear. The instructions are very helpful here showing how it should be set and once in place the exhaust and fuel tank soon follow.

I was a bit surprised to find that the steering servo is mounted upside-down through the chassis so the output arm is underneath and likely to get very wet. It is protected with a brace which will also protect the steering linkage. A simple pushrod connects the servo arm to the steering arm where it connects with an adjustable clamp.

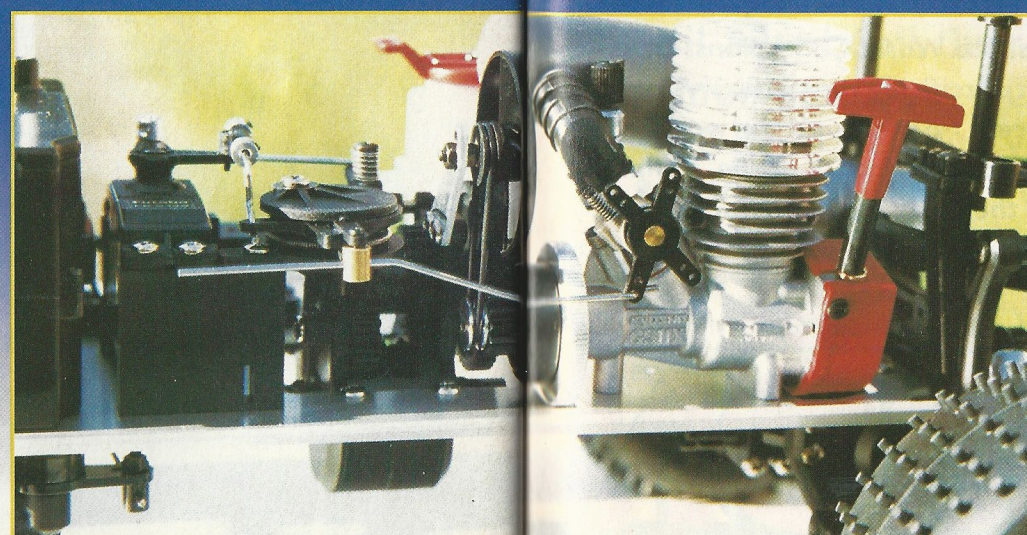
With the throttle servo in place, the interesting throttle linkage is made up. This little assembly is a bit of a fiddle to put together as a circular spring has to go round two separate semicircular pieces. The resulting levers work in

such a manner that which ever way the input arm from the servo moves, the output arm to the throttle always opens the throttle - cunning! That clever bit of design work is really what makes the QRC reliable in operation because with the throttle servo at 'neutral', the engine is ticking over as pre-set by the idle screw, while the QRC is in neutral. The set-up of the throttle linkage ensures that as the throttle servo moves either way (for forward or reverse), the QRC engages gear BEFORE the throttle opens. Equally when the throttle is fully open in forward, as you go to engage reverse, the throttle closes before the QRC goes through neutral to reverse after which the throttle opens again. Now that is very very clever because it protects the QRC from taking too much shock, so adjust the rods and collets as the book says!

With all that done all that's left is the air cleaner and body supports to fit, plus the all important wheels and tyres which need cyano to stick them in place.

One thing that I can never see myself being any good at is painting, so after a quick word with the Ed, the Baja Beetle Body went off to Paul Dudley of Puma Models and returned with the fantastic paint job that see here which meant that all I had to do was to attach the 'shiny bits'.

Set-up the throttle linkage exactly as per the instruction or the QRC will not perform correctly.



Running with the Baja

It was good to find a well detailed instruction sheet for the GS11-X that included how to run in the engine as well, this provides a complete new comer with all they need to run an IC engine for the first time. Having said that the needle was set too lean but that was soon fixed. Two tanks of fuel were put through the engine and transmission after which the engine response was a lot snappier and the transmission a lot more free running. While I was doing this, I also got set the throttle trim which needed to be accurately set so that the QRC was in neutral with hands off the Tx stick (I had set the Tx throttle stick to a true neutral position i.e. at the centre of movement).

What a blast this Baja Beetle is! The wheelies are something else - forwards and backwards and all with 4WD Nitro Power. I was surprised at the steering response as I had only fitted a standard servo which I fully expected to struggle with the big wheels and tyres but as long as it's moving the response is fine. The spiky tyres are ideal for general off road use no matter whether its gravel, sand, paths or proper off road tracks. The permanent 4 WD makes sure it keeps moving and the Baja is surprisingly fast. With the lower

reverse gear, if you hit a hill that is too much going forward, have a go in reverse, the lower gear will haul it up!

Another fun part of the Baja is that the reverse makes it incredibly manoeuvrable so you can take it where other cars can't go and get it out again!

Summing up

It's quite a while since we have seen something new and I guess in many ways we have been waiting a long time for this sort of car to arrive, I wouldn't be surprised to see a lot more coming onto the market featuring similar ideas, having said that, the QRC is 'patent pending'. The quality of the parts and build is up to the expected Kyosho standard, but I hadn't expected to have mouldings left over on the sprues, a note to that effect would have saved some confusion. I'll be interested to see how the car stands up to the harsh treatment it's going to get. The instructions include a list of optional parts such as ball bearings, steel differential gears, up-rated springs, universal Swingshafts and sports shocks which will improve the performance of the car. Altogether it's a great package and is remarkable value for money, the QRC adds a whole new dimension to off road Nitro power and is definitely a step in the right direction even if it is in reverse! **RRC!**

Plenty of ground clearance.

