

Slot.it H.R.S. universal chassis

The Slot.it HRS chassis is an adaptable 1/32 scale slot universal chassis, which can be used in conjunction with many bodies either from static plastic kits, resin cast bodies, or whatever you might want to convert as a slot car.

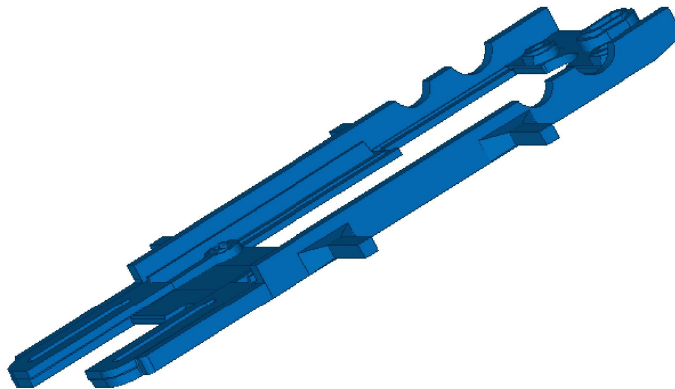
H.R.S. stands for **H**.ot **R**.oddicus **S**.upersonicus: it is one of the several names of the Roadrunner in the Wile.E.coyote cartoons. As long as Warner Bros. does not complain, we will not have to call it dumb names like High Revs Speedster! Enough said.

Features of the Slot.it H.R.S. chassis:

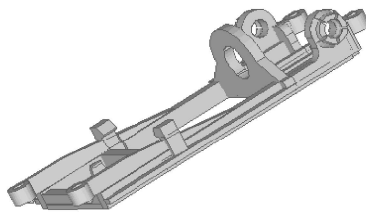
- Configurable as either inline, reverse inline, or sidewinder.
- Revolutionary floating bushing system.
- Patented magnetic and tuneable stiffness suspension system.
- Fiber-composite plastic.
- Adjustable (71 to 89mm) wheelbase.
- Adjustable (4mm) pickup position.

The Slot.it chassis is made of four main parts:

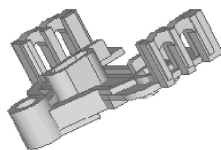
main chassis



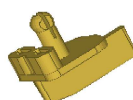
motor mount



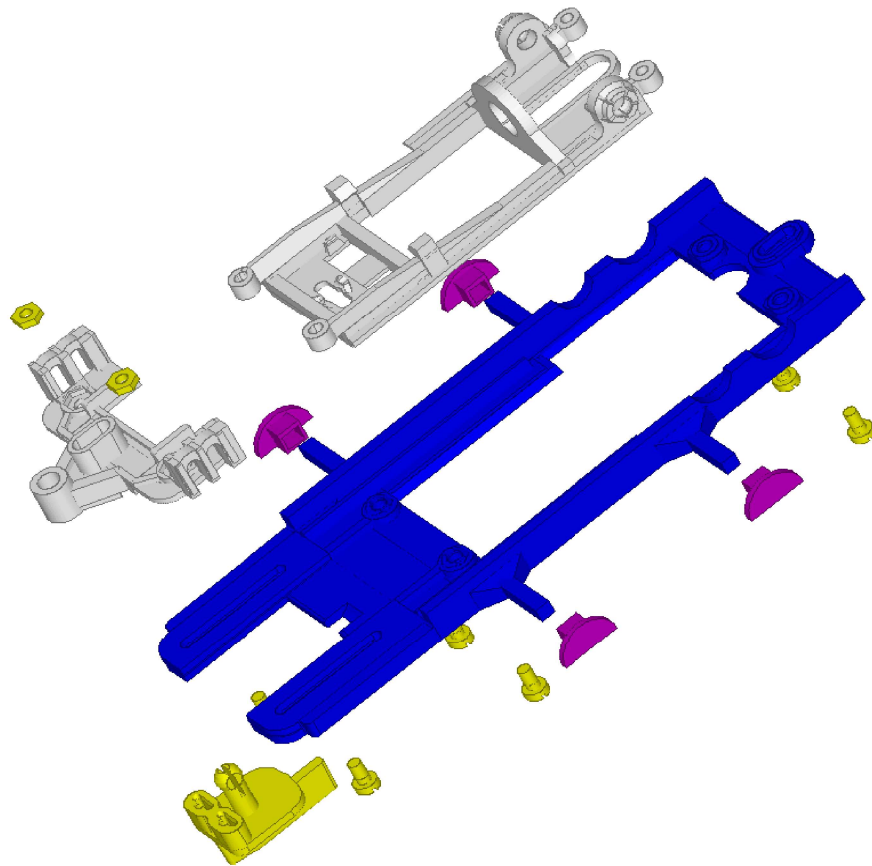
front chassis



pickup



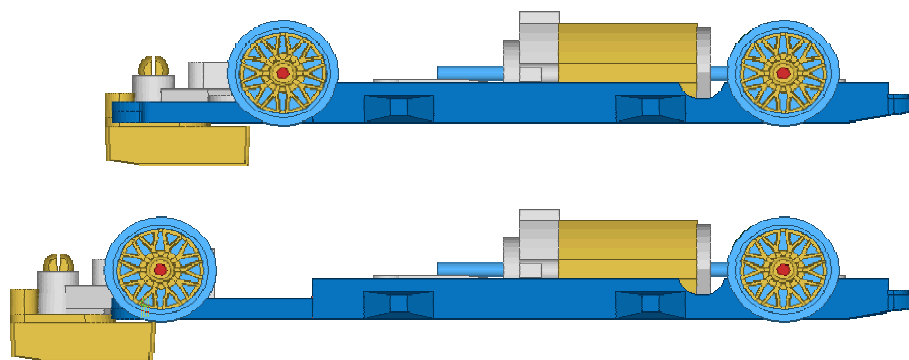
The following image details how the parts are assembled: this is really straightforward and should not pose a problem.



The body is mounted to the chassis either by using the front/rear oval hole, or the provided 4 receptacles, that must be glued to the body, according to the instructions below.

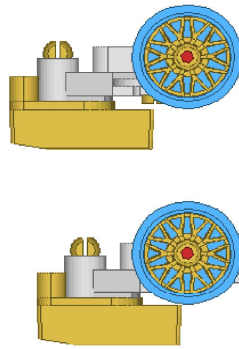
Configurable wheelbase: the HRS chassis is quite configurable, in order to match the largest possible number of bodies on the market. The following can be tuned for this purpose:

Wheelbase: it can be adjusted by unlocking slightly the two front brass screws. Wheelbase between 71 and 89 mm can be obtained



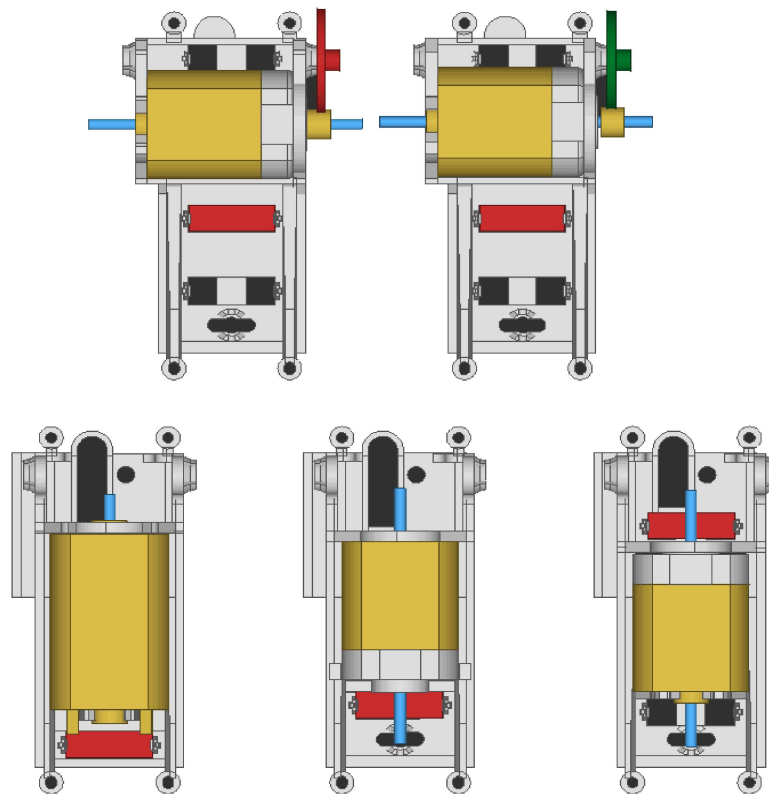
Adjustable pickup position:

This picture shows what can be obtained: note the different distance between the pickup and the front wheels: in fact, two possible positions are available, at a distance of 3.9 mm from each other.



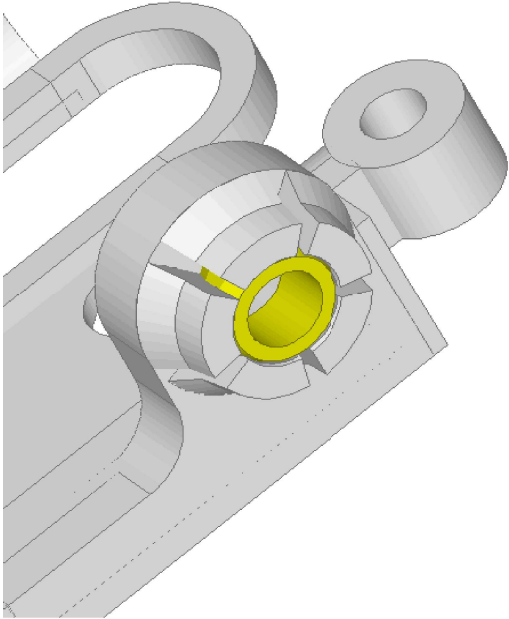
Configurable motor mount: the motor can be mounted either in inline or sidewinder position, changing the motor mount adapter, depending on your car, preference or track type

You do not have to reconfigure anything: just drop the appropriate motor mount in place. Any of the 5 Slot.it available motor mounts can be used.



Self-aligning gimbal bushing system: the key to good performance is to have tight tolerances AND low friction between the rear axle and the bushing. With traditional 'cylinder shaped' bushing, this is not possible: if the tolerance is very small, the plastic chassis, which is not perfect, will force the bushing out of center hard enough to create a lot of friction, and on the other hand, if the tolerance is large to prevent the said friction, sloppiness will occur and the car will vibrate. We decided to take no easy routes: we designed a spherical bushing that snaps into a spherical receptacle, so that the bushing could rotate together with the rear axle. Making the mould for this was not a piece of cake, definitely, but the result exceeded even our expectations. Even if the motor mount chassis is twisted (way beyond what would happen in real life situations), the two bushings sit in the best position for the job, changing their orientation dynamically together with the axle. Furthermore, the design allowed us to keep the width of our bushing to a minimum, and this, in turn, further reduces friction. The result is really, really as smooth

as silk...



Assembling a car body with Slot.it H.R.S. universal chassis

To assemble the chassis, you need:

a cross head screwdriver, and a flat head screwdriver.

To mount it on a body, you need:

depending on the body, 2 screws and/or two components resin or cyan glue. A Big file or flat wrench will also help

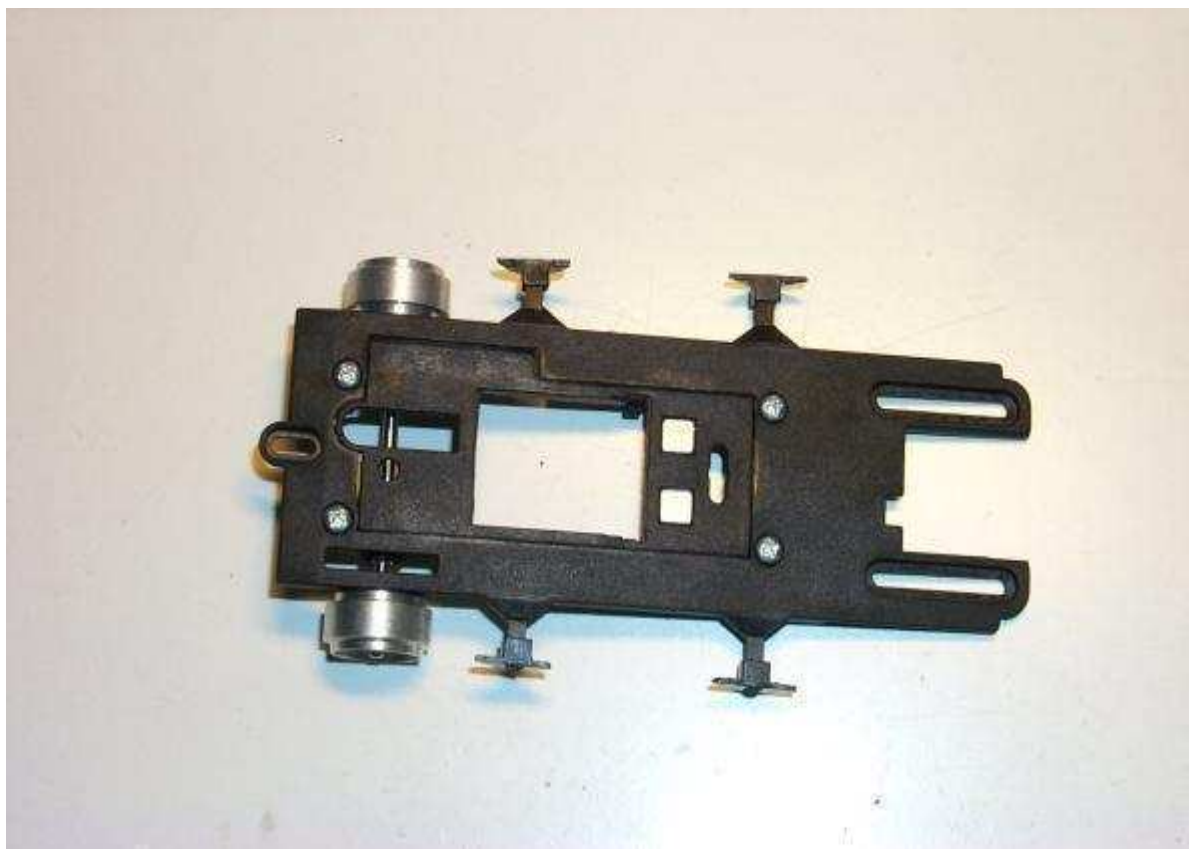
1. Partially assemble the chassis with: main chassis, motor mount, rear axle, rear wheels, magnet.



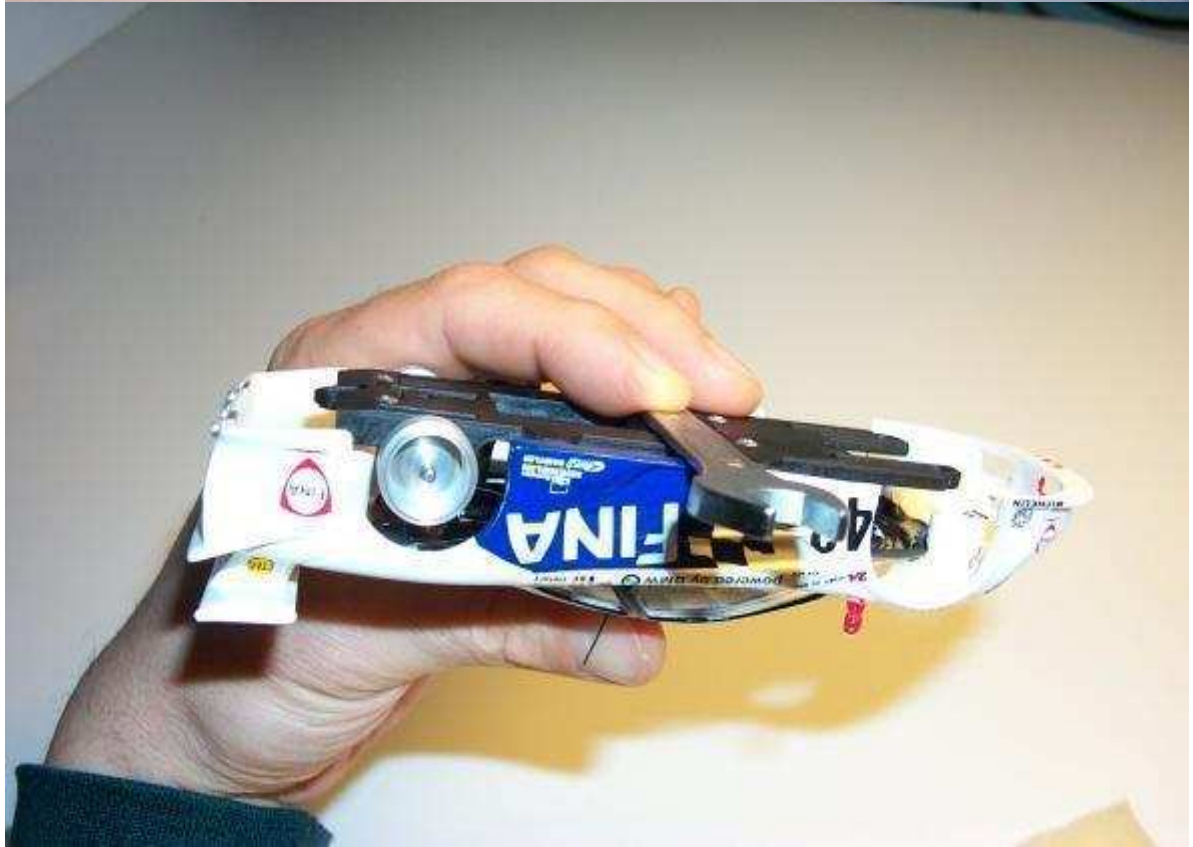
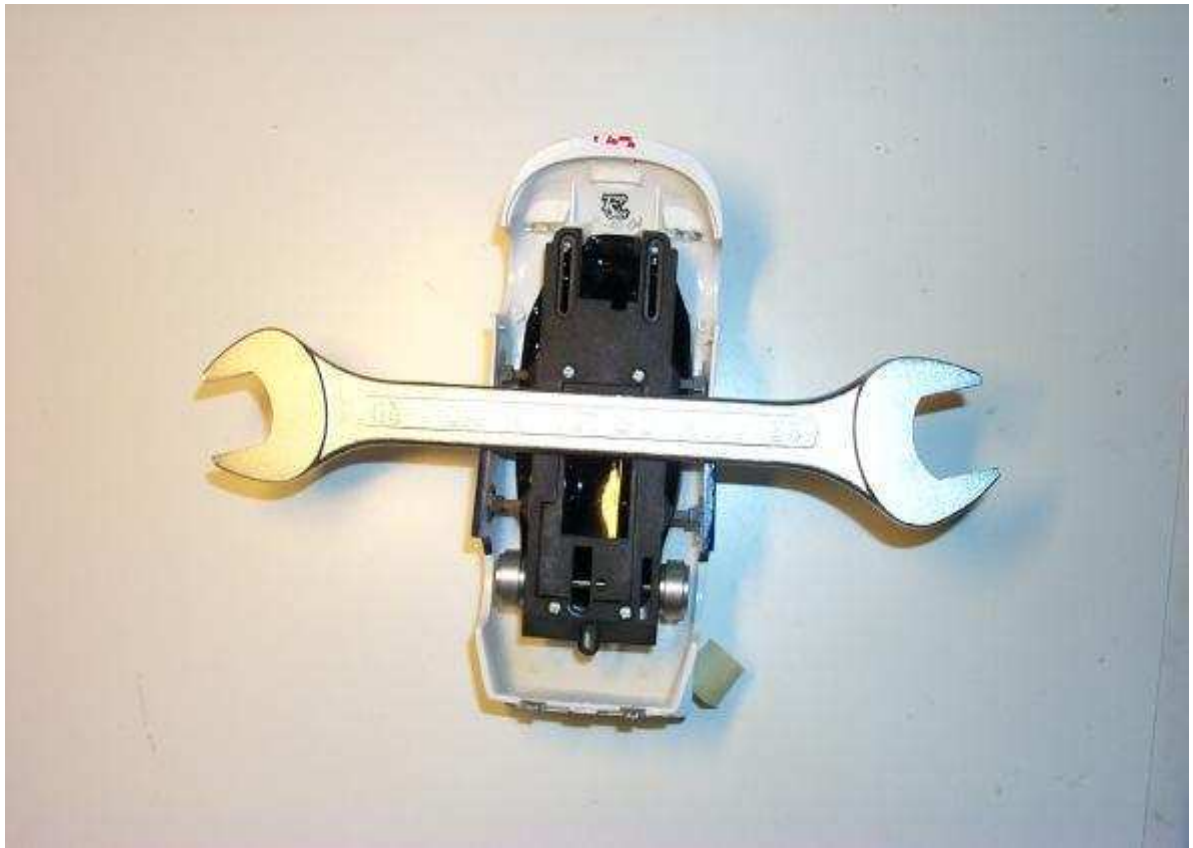
2. Put the selected body upside down (hint: use clay or tape to keep it firmly in place) and trim the 4 spikes to length, so that the chassis can fit inside the body (do not cut too much! Be careful! Do not cut the 4 'spikes' too short)

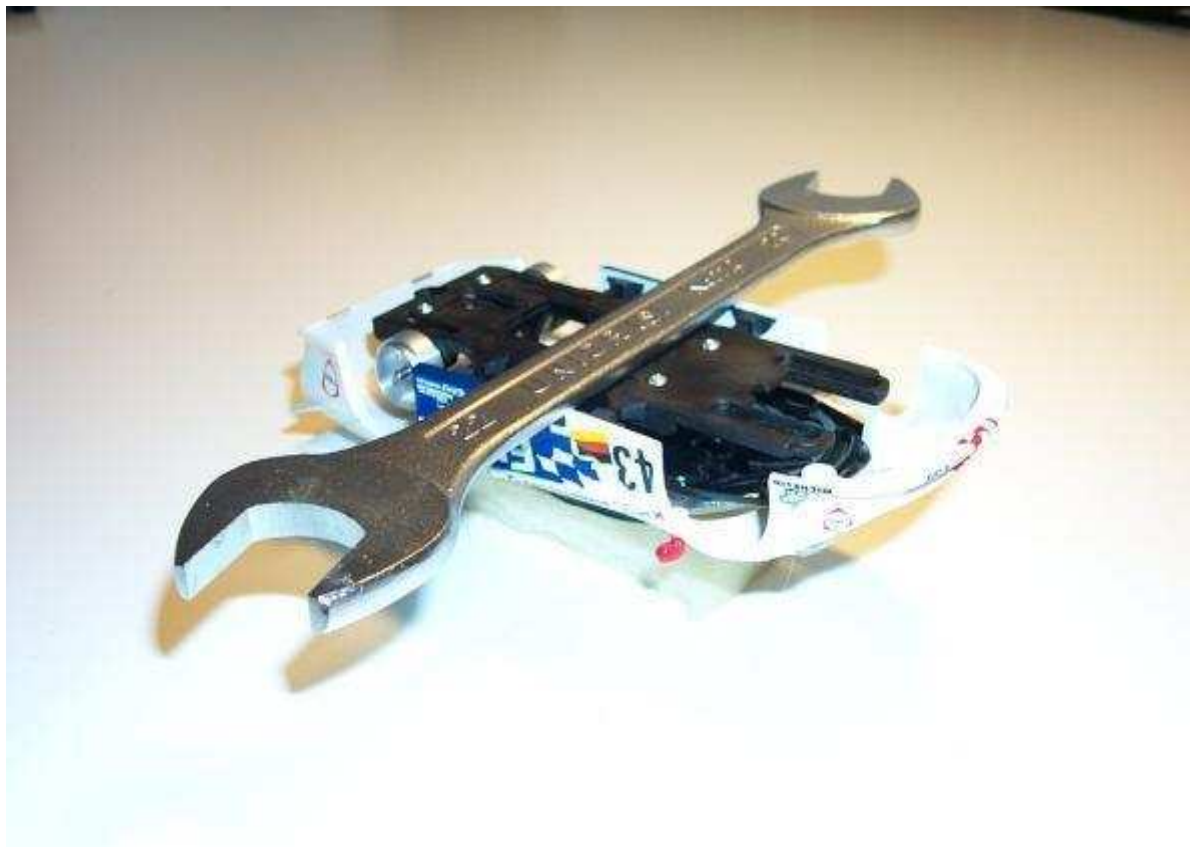


3. Put the four body mount supports on the spikes, and make sure everything fits inside the car.



4. Now comes the fun part: the objective is to mount the chassis flat with the body, to make sure the car will sit perfectly on the track. So, put a flat, large wrench (or a large file) on the chassis: the magnet will snap to it. Now, the wrench will keep a perfect alignment between the chassis (since it is magnetically coupled to it) and the body, up on which it will keep the chassis pressed due to its weight. Voilà! All that is left to do, now, is to make sure that the wheel is properly positioned in the middle of the wheel arch.

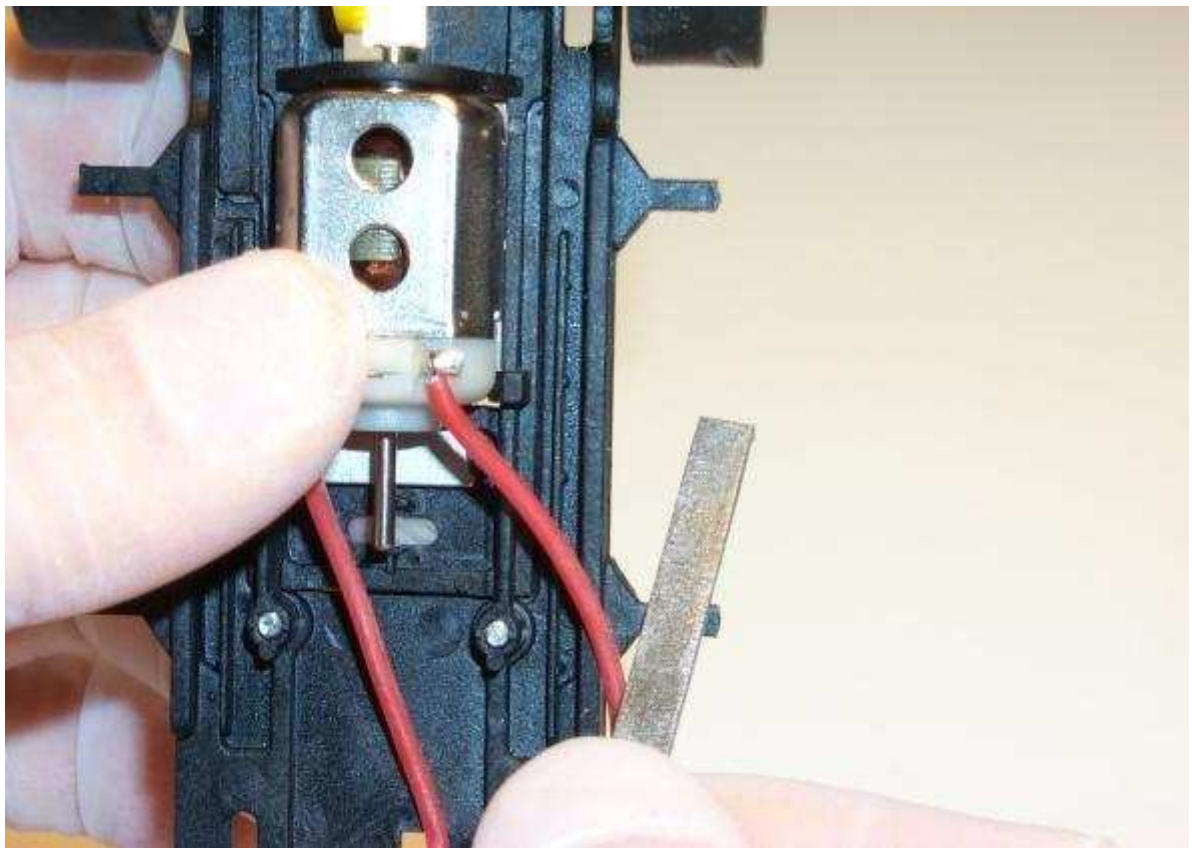




5. Now, with everything in the right place, put a little drop of super glue (cyanacrilate) between the body and the 4 body spikes receptacles (indicated by the red scalpel). This is just to make sure nothing will move anymore. Once the 4 body receptacles are in place, mix two components resin, and use it to bond permanently the 4 chassis side receptacles to the body.



6. The best performance is obtained when there is some degree of freedom between the body and the chassis. So, using a small file, trim the edges of the spikes so that they allow good play between the body and the chassis.



That should be all folks!