

# GUIDE FOR **EASY SETUP** AND **TUNING CARS**



edited by **Andrea Noviello**



[www.nsrslot.it](http://www.nsrslot.it)



NSR - Factory



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NSR World Champion



**NSR** offers to its own fans, a guide for an easy set up and tuning cars.

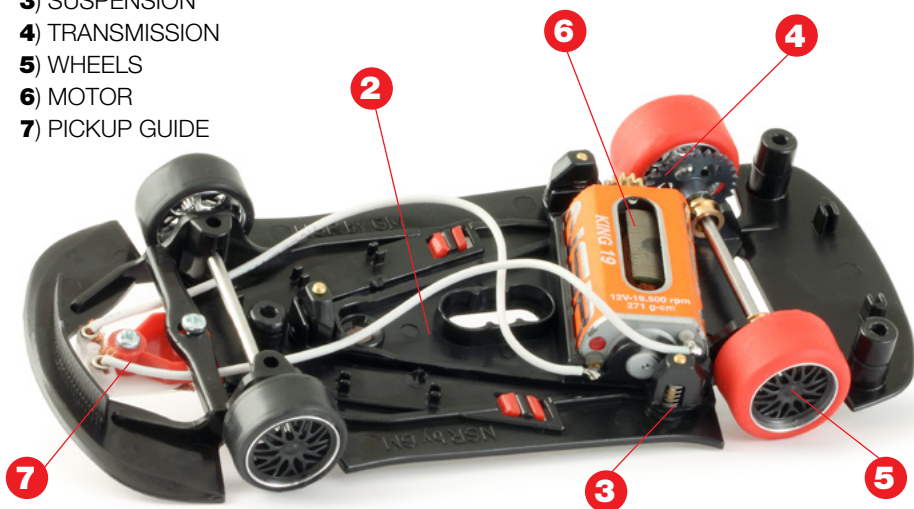
**Premise:** veterans slot racers may know also other knowledge that are not written but we want to help the “medium slot racers”, giving some general information. In this way, you can easy tune your cars also if you are not the best driver or mechanics, and also if you have not so much time to spend.

If you want to race in some **NSR** races do not forget to read the official rules on NSR website [www.nsrslot.it](http://www.nsrslot.it) so you can check allowed and not allowed changes.



### Slot car is composed by some main parts:

- 1) BODY
- 2) CHASSIS AND MOTOR SUPPORT
- 3) SUSPENSION
- 4) TRANSMISSION
- 5) WHEELS
- 6) MOTOR
- 7) PICKUP GUIDE



## 1 – BODY



If you want to increase the slot car performance, we suggest to change the original cockpit with LEXAN interior ([see NSR catalog](#)).

To have a better performance it is really important that body and chassis move freedom.

To increase this movement, we recommend to use “Metric Screws EASY SET UP” (code 4834).

DO NOT completely tighten the body screws (tighten completely and rotate back about 1 or 2 complete spin).

## 2 – CHASSIS

Some different hardness chassis are available: soft (blue), medium (black), hard (white), extrahard (green).



Choose the best chassis depend mainly from the personal driving style, and from the grip condition of the track or of the car.

A soft chassis means a “glued” car on the track (so much grip), an hard chassis means a fluent car. To find the best compromise:



We suggest to use a soft chassis (blue) in LOW GRIP condition (slippery track, dirty, floor with low grip, tyres with low grip).

Soft chassis is suggested for track as Carrera or Ninco (when there is not rubber on the floor).



We suggest to use a medium chassis (black) in medium grip condition (track with good grip, tyres with good grip, for example “Ultra-grip” NSR tyres).

Medium chassis is suggested for track as Carrera or Ninco (when there is a little of rubber on the floor).



We suggest to use an hard (white) chassis in high grip condition (track with a lot of grip, tyres high grip, for example “Extreme” NSR)

Hard chassis is suggested for track as Ninco (when there is a lot of rubber on the floor) / or for Wooden Track (light/medium glue mixture).



We suggest to use an extrahard (green) chassis in very high grip condition (track with a very high grip, sponge tyres).

Extrahard chassis is suggested for wooden track (medium / heavy glue mixture).

CONDITIONS	EXAMPLE TRACK OR TIRES	CHASSIS TO BE USED
SCREW ADHERENCE	Carrera / Ninco not slippery Tires: low grip adhesion (hard compound)	SOFT BLUE
DISCRETE ADHERENCE	Carrera / Ninco with a lot of rubber Tires: good grip adhesion (example nsr special rtr compound)	MEDIUM BLACK
HIGH ADHERENCE	with a lot of rubber Ninco Wooden track with light - medium mixture compound Tires: high grip (example extreme nsr compound)	HARD WHITE
VERY HIGH ADHERENCE	Wooden track with medium / heavy mixture compound sponge tires	EXTRAHARD GREEN



## MOTOR SUPPORT

As the chassis, there are many hardness motor support available: soft (blue), medium (black), hard (white), extrahard (red).

We will choose the best configuration just between extrahard motor support and medium motor support. Other hardness motor support require more specific test and the differences are not so easy to check. So, we will talk only about the main motor supports:

The "box stock" motor support (extrahard red) ensures a fluent configuration, very good for high grip condition) code 1259 GT/GT3, 1270 Classic.

If you need more grip and better performance, you can use the medium (black) motor support. These motor support is really versatile to many conditions, and it always ensure good performance. Code 1257 GT GT3 / 1272 classic.

### 3. SUSPENSION



Slotcar's performance can be easily improved using NSR SUSPENSIONS KIT. Using them, the car can better work, having the best grip also if there are many bumps on the track.

**NSR** offers 3 suspension kits:

**Medium:** the most used, they are easy ADAPTABILI VEDI to all track conditions.

**Soft:** They are suggested in low grip condition (slippery track, hard tyres)

**Hard:** They are suggested in high grip condition (track with a lot of rubber on the floor / very very soft tyres)



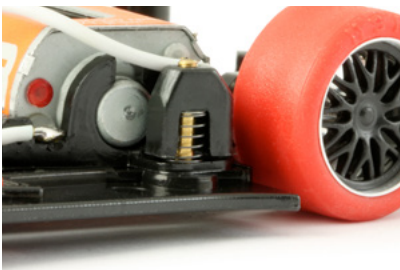
It is possible to adjust the motor support's movement, screwing the suspension bolts. A good starting set up can be:

Front screw (of the motor support) all blocked.

Rear bolts 2 rounds unscrewed (block them and turn back 2 complete rounds).

This is a good initial setup.

Who like to test, can also try to adjust this base regulation, screwing step by step the bolts.



## 4. TRANSMISSION

TRANSMISSION group includes: bushings, axle, crown, pinion.

### BUSHINGS

To improve slot car's performance you can use "No Tolerance RACING Bushings NSR" (code 4846 Classic / 4847 GT/GT3 / 4805 Classic NEW) because they reduce their movement on the motor support. So, the performance will be better in all parts of the curve.

We suggest to always oil the bushings, using specific NSR Oil (code 4606). Doing this, the bushings life will be very very long.



### CROWN / PINION

A LONGER ratio gear ( less teeth of the crown / more teeth of the Pinion) means more maximum speed and better fluency.

A SHORTER ratio gear ( more teeth of the crown / less teeth of the pinion) means more acceleration and braking.

The choice of the ratio gear is mainly based on the type of track and motor used.

If you want to change the ratio gear, we suggest to change the crown because this operation is very easy.

Original ratio gear makes a very easy car to drive and so versatile. Changing original ratio gears, the cars could be a little more difficult to drive because it will be faster.



## Some samples of suggested gear ratio

(nice initial setup):

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Configuration **AW MOTOR KING 21 EVO/3**

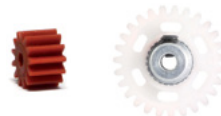
Recommended pinion z13 gear z29



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Configuration **AW MOTOR BABY KING 17**

Recommended pinion z13 gear z27 (entrambi in plastica)



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Configuration **AW MOTOR KING 19**

Recommended pinion z13 gear z28



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Configuration **SW MOTOR SHARK 20**

Recommended pinion z11 gear z30



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Configuration **SW MOTOR SHARK 25**

Recommended pinion z11 gear z32



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Configuration **IL MOTOR KING 21 EVO/3**

Recommended pinion z10 gear z24



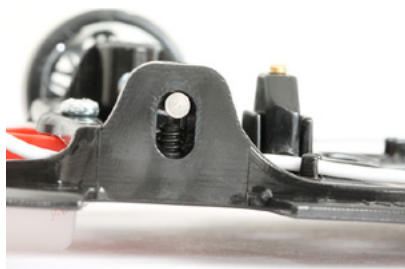
## 5. WHEELS

Wheels are one of the main slot car's components.

The wheel is composed from the rims and the rubber.

To choose the correct wheel you have to keep in mind mainly: width, diameter and compounds.





## FRONT WHEELS:

It is suggested to not have contact between front wheels and the track.

To do this, insert the NSR screw (4808 code) in their correct place (see the photo), and bring the front axle up.

Verify that the axle moves freely.

It is really suggested to use small diameter of front wheel, **NSR** offers **ULTRA LOW PROFILE 5200** rubbers for an excellent performance.

Use only front rims! (see the photo)



## REAR WHEELS:

Lower diameter of the wheel means a lower height from the ground, so a better performance.

To easily increase the performance, it is suggested to use a LOW PROFILE wheels and racing material:

**GT3 SERIES:** suggested the new rubber Special RTR 19.5 x 11 (code 5260) on original NSR rims.

**LMP / GT3 SCALEAUTO – SIDEWAYS:** suggested the new rubber Special RTR 20 x 10 (code 5261) on 16.9 to 17.5 mm diameter rims.

**CLASSIC / GRUPPO C / GRUPPO 5 / DTM:** suggested the new rubber Special RTR 19.5 x 10 (code 5262) on 15.9 to 16.5 mm diameter rims.

**MOSLER:** suggested the new rubber Special RTR 19.5 x 12 (code 5263) on original rims 5002 or on larger rims (better performance, code 5015).

There are 4 **NSR** compounds for rear tyres:

**Supergrip, Ultragrip, EXTREME** and the new mix **Special RTR**.

**Supergrip:** Standard compound “out of the box”.

**Ultragrip:** softer compound that ensures better performance and more grip.

**EXTREME:** softest compound, amazing grip and best performance. Use them only if the rubbers are glued and turned on the rims

**Special RTR:** Special material, best grip and best life of the tyres. RACING TYRES, designed to be used also without “trued and glued” on the rims. Also available special package of 20, 50, and 100 rubbers very cheaper!

We suggest to use **AIR SYSTEM** rear rims, as original setup.

**NSR** offers the possibility to buy high performance tyres, also just turned and glued on the rims, that ensures best performance (see the catalog).

## 6. MOTOR



**KING 21 EVO/3**



**KING 19**



**KING 25**



**SHARK 20**



**SHARK 22**

Motor is one of the main parts of a slotcars and it can easy change the performance on the track.

**NSR** motor on the box stock cars are already so performing, they have a perfect speed (RPM), high torque and very good magnetic effect.

It is possible to change the original motor with other faster or slower NSR motors.

We suggest to **NOT** use too fast motors, because the car could be more difficult to drive.

Some samples of good motors configurations:

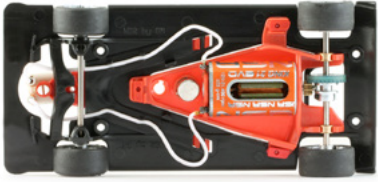
**GT3 SERIES:** suggested motors for plastic tracks KING 19 or KING 21 EVO/3

**GT SERIES:** suggested motors for plastic tracks KING 21 EVO/3 or KING 25

**CLASSIC SERIES:** suggested motors for plastic tracks: SHARK 20 or SHARK 22

**NSR** cars can be bought or tuned in many configuration: AW Anglewinder, SW Sidewinder, and IL Inline.





**IL configuration:** equipped with NSR KING motor (long can), ensures really good braking, speed and magnetic effect. Anyway, IL setup has more difficult in agility in tight curves and balance.

**SW configuration:** equipped with NSR SHARK motor (short can), ensures very good agility in tight curves and less weight. Anyway, SW setup has less magnetic effect and torque.

**AW configuration:** the most used, the best configuration. It is equipped with NSR KING motor (long can) inclined about 30° from the horizontal axis.

We suggest AW configuration because it ensures perfect balancing, magnetic effect, torque, acceleration, braking, speed, agility and grip.

## 7. PICK-UP GUIDE

You can also improve slot car's performance using other tuned spare parts, as pick up guide. We suggest to use racing pickup low profile with screw because it ensures a better performance on the track. It is available NSR pickup with long blade and short blade. Is generally suggested the short blade for Classic cars and long blade for GT / GT3 cars.

For track with a lot of bumps, we suggest to use standard pickup (without screw), with long or short blade (as written before about the blade).

For rally setup is suggested Rally Pick-Up, that always keep a good contact on the tracks with its long stem.





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