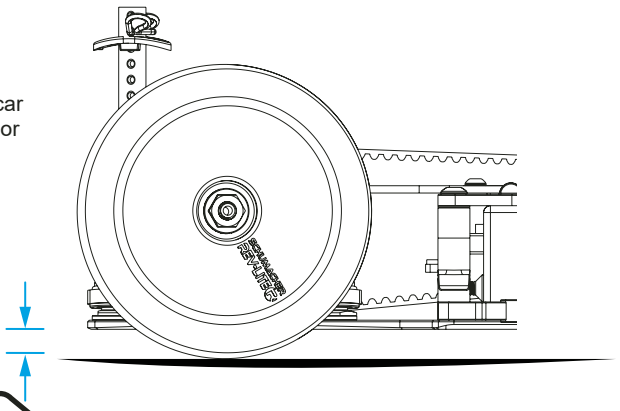
Mi9 TRACK SETTINGS

RIDE HEIGHT

See Page 24 Step 21

Use the spring adjusters on the shock absorbers to adjust the front and rear ride heights. We recommend setting the ride height to around 5.0mm on carpet/ high traction tarmac/asphalt and 5.5mm on tarmac/asphalt or low traction carpet tracks.
This is measured between the bottom of the chassis and the ground with the car in running trim. First press the car down on to the ground and release it once or twice to settle the suspension before adjusting the ride height.
In general:
High traction levels/Smooth tracks =Lower ride height (4.6mm-5.2mm)
Low traction levels/Bumpy tracks = Higher ride height (5.2mm-6.0mm).



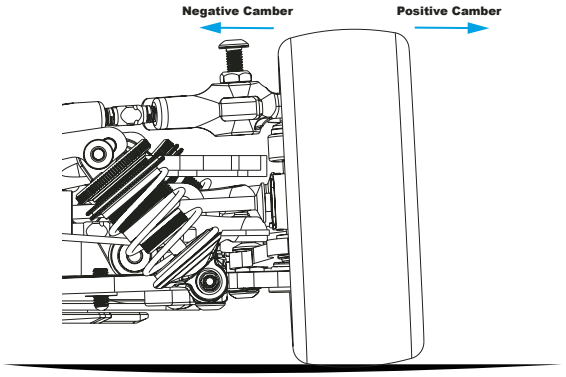
CAMBER

See Pages 16 & 17 Steps 16a & 16b

Front and rear camber is set by adjusting the pair of upper turnbuckles:
Shorter turnbuckles= More Negative camber.
Longer turnbuckles= Less Negative camber.
**The Camber and Castor setting should be set using a setup system such as SK-600069-01 or AM171040-LE combined with castor pointers U8771

In general the aim is to run the correct amount of camber for the tyre being used and the track conditions. Typically this is between 1.0°-2.5°.

Increasing the front and rear camber together will often result in more traction, but with a more sudden loss of grip when going beyond the limit. Less overall camber will offer a more progressive slide but may have less overall grip.
More castor may be applied to the front or rear, normally resulting in more grip at that end of the car. The team suggest a starting camber of 2° Rear and 1.5° Front, increasing to 2° Front camber if more front grip/steering is needed.



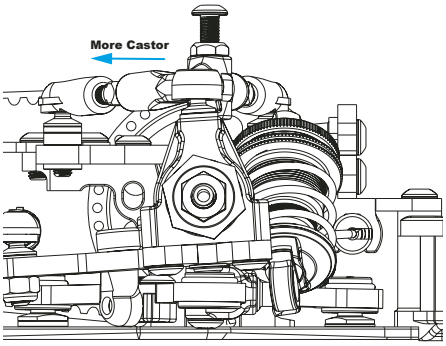
CASTOR

See Pages 16 & 17 Steps 16a & 16b

Castor can be set by adjusting the upper turnbuckles. After camber has been set, lengthen one turnbuckle, and shorten the other by the same amount, until the castor is set as desired.
**The Camber and Castor setting should be set using a setup system such as SK-600069-01 or AM171040-LE combined with castor pointers U8771

More front castor will result in a smoother, less responsive initial steering response, with more mid corner/ on power exit steering.
Less front castor will give a more aggresive initial steering response but less steering thereafter. Kit setting is 4°.

Rear 'castor' can be adjusted, altering the wheelbase. Kit setting is 4°

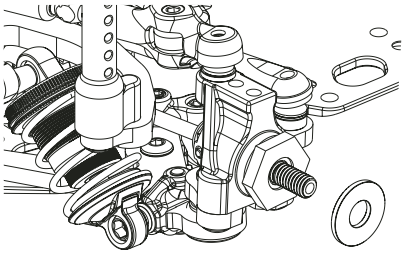


TRACK WIDTH

See Pages 14, 15 & 28 Steps 14, 15 & 24d

The track width may be adjusted using 2 different hex widths, or shims:
U8333 - Wheel Hex Spacers 0.25, 0.5, 0.75mm - (pk12)
U8720 - Alloy Wheel Hex - Mi9 (pr)
U8762 - Alloy Narrow Wheel Hex (-0.75mm) - Mi9 (pr)

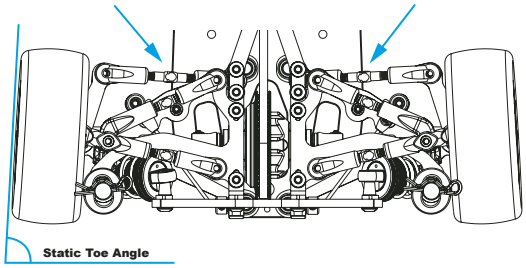
Increasing the rear track width provides more rear stability/less rotation and vice versa.
Increasing the front track width provides a less agressive/less rotation and vice versa.
A wider car is better suited to high traction conditions and a narrower car to low traction conditions.



STATIC REAR TOE

See Page 11 Step 8b

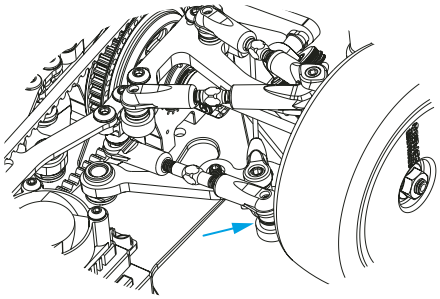
Static rear toe is measured on setup gauges such as SK-600069-01 or AM171040-LE and is the toe angle of the rear wheels when at ride height. The kit setup is 3°.
This is adjusted simply by altering the length of the rear turnbuckles shown.
More rear static toe in provides more stability, rear grip and forward traction.
Less rear static toe in offers more rotation providing the rear stability is enough to drive confidently through the corner. There will be less forward traction exiting the corner however.
In low traction conditions the team suggests a range between 3°and 4°.
In high traction conditions the team suggests a range between 2° and 3°.



DYNAMIC REAR TOE

See Page 15 Step 15

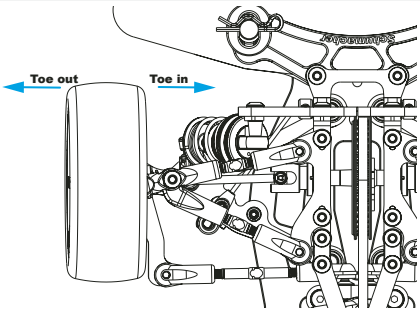
Dynamic rear toe is a toe in angle that changes with roll or squat. This allows for a rising rate toe setting through a corner providing good entry steering but with more stability through the corner and more forward traction on corner exit.
The roll centre or rear castor setup affects passive toe gain a specific spacer provides. 1mm gives approximately static toe in most common car setups.
The team recommend:
- 1mm in high traction conditions or when a lot of steering is needed.
- 4.5mm in low traction conditions or when a lot of stability is needed.
Kit setup is 2.5mm, a good neutral point.



FRONT TOE

See Page 20 Step 17

The front toe is set by adjusting the steering turnbuckles.
Toe in will give a more stable car and less responsive/nervous initial steering.
Toe out will give a more agressive car with more responsive initial steering.
The team recommend a range between 0° and 1° of toe out. It is very rare to benefit from toe in on the front of the car.



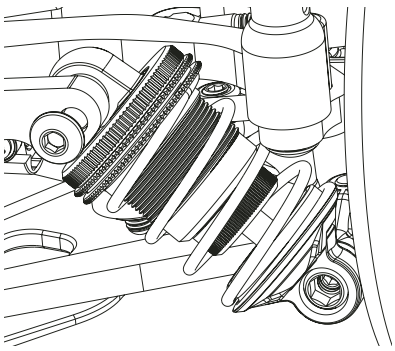
SHOCK SPRINGS

See Page 24 Step 21

Shock springs are used to set the suspension stiffness.
The team recommend a starting setup using CORE RC Orange springs at the front and Black at the rear (included).

Stiffer springs increase response, forward traction and high speed stability. The track should be smooth when going to very stiff springs.

Softer springs slow down direction change but may provide more overall grip, when the track grip is low. They may cause high speed stability issues if the grip is too high. Soft springs can be better when the track is bumpy. A softer car can sometimes be a benefit in very high grip, in order to prevent traction roll.

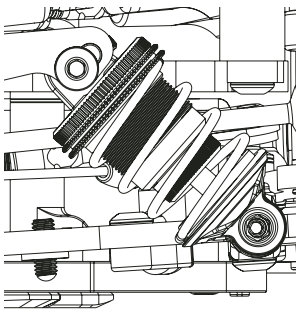


SHOCK ANGLES

See Page 24 Step 21

Similar to the shock spring setup, the shock angles can provide fine tuning over the suspension stiffness.
A more angled shock setup (lower number shock mount holes) creates a softer setup which is less responsive, often suited to high traction conditions.

A more upright shock setup (higher number shock mount holes) creates a stiffer setup which is more responsive, often suited to lower traction conditions.

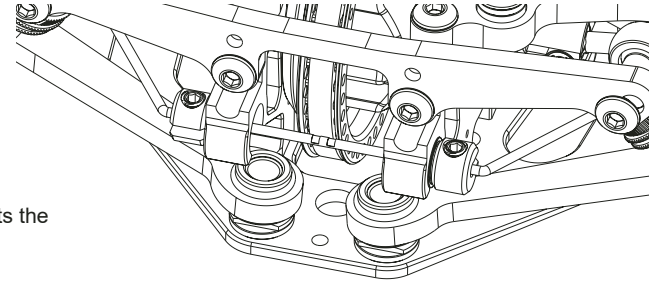


ANTI ROLL BARS

See Pages 21 & 22 Steps 19a & 19b

Anti roll bars allow the tuning of roll stiffness and change the way that the weight is transferred.
A stiffer rear roll bar will reduce entry steering but increase on power steering.
A stiffer front roll bar will increase entry steering, but provide a smoother handling through the middle of the corner.

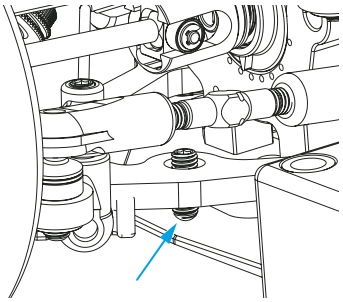
The roll bars need to be set equally left to right. This is done by adjusting the drop link ball height. With the shocks off, check the roll bar lifts the opposite side when lifted to an equal height. A great tool for this is AX015.



DROOP

See Pages 11 & 12 Steps 9 & 10

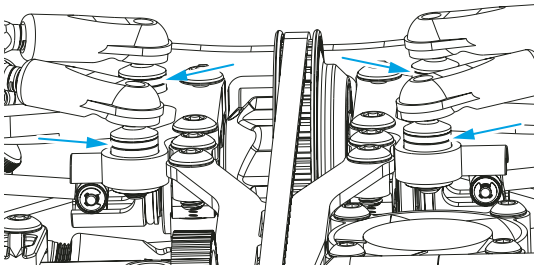
The starting point for droop suggested by the team is 22.6mm rear, 23.8mm front. These numbers are checked on the Aerox droop gauge set. AX015. This is the measurement between the chassis underside and the axle centre. Droop is adjusted using the grub screw illustrated.
The suggested range is:
Rear- Between 20.4mm in low traction and 24.0mm in high traction.
Increasing the rear droop often provides more stability.
Front- Between 21.4mm in low traction and 25mm in high traction.
Increasing the front droop gives a more agressive handling.



UPPER INNER LINK HEIGHT

See Page 9 Step 7a

The washers under the 4 upper inner link ball studs are the main suggested method of changing the angle of the upper links. We recommend keeping the outer ball stud spacing around 1mm to ensure good thread engagement into the plastic hub carriers. Generally, less washers at that end of the car gives more grip. Adding washers in the front/rear together can provide a freer car with more rotation. Suited best to high traction.
NOTE: The high transmission housings (U8729) will increase the height of the ball studs by 2mm. Make sure to take this into consideration when changing between 'high' and 'low' transmission housings.



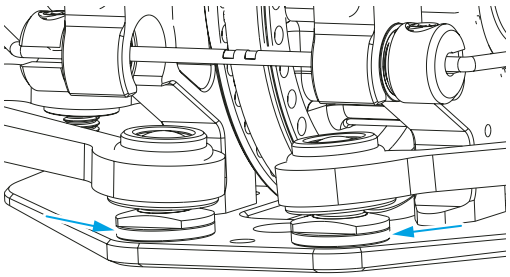
LOWER WISHBONE SPACERS

See Page 12 Step 11

Higher wishbone balls= Raised roll centre, suited to higher traction conditions.
Lower wishbone balls= Lower roll centre, suited to lower traction conditions.

The team often uses wishbone balls 0.5mm lower in the front than the rear, providing more steering, but a slightly more difficult car to drive.

Lowering the front-front balls (angling the front wishbones down to the front of the car), by 0.5mm (the kit setting) is another team favourite. This creates some anti-dive, giving a much smoother steering, particularly on corner entry.

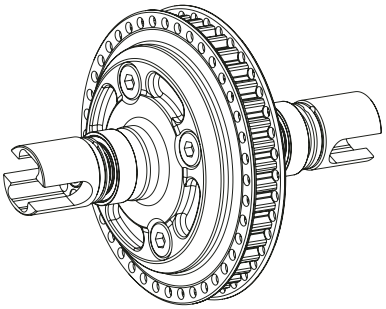


GEAR DIFF

See Page 4 Step 3

Gear diff oil can be changed to affect car handling.
Generally, high traction conditions = thicker oil. (7k-12k)
Low traction conditions = thinner oil. (3K-7K),
A thicker gear diff oil will have a much smoother off power, corner entry feeling, preventing corner entry over rotation. It will also make the car feel less likely to slide off power, in the corner. It will however have more on power steering, and can feel like on power oversteer.

Thinner gear diff oil will create the opposite effect. More aggressive corner entry, and more steering off power in the corner. It will have less on power steering, but will feel much easier to put the power on without oversteering.



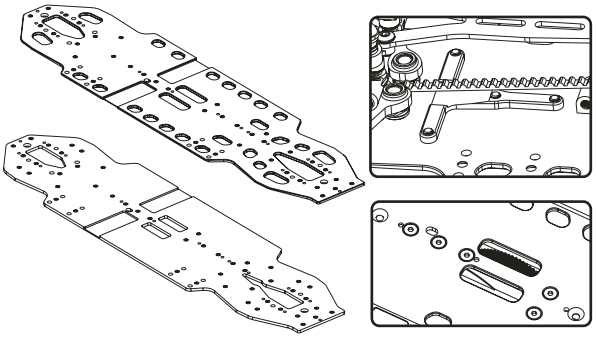
CHASSIS FLEXIBILITY

See Page 2 Step 1

High grip conditions=Stiffer chassis setup. Low Grip conditions = Flexible chassis setup.
The Alloy chassis is the stiffest option and is best in very high grip conditions. The CF chassis is best in low or medium grip conditions. It will generate more traction.

The motor mount has 4 chassis screw options. Use more screws to increase the overall chassis stiffness. A minimum of 2 screws is required.

U8256 Alloy T Brace increases rear chassis stiffness and creates more rotation and is intended for high grip conditions.



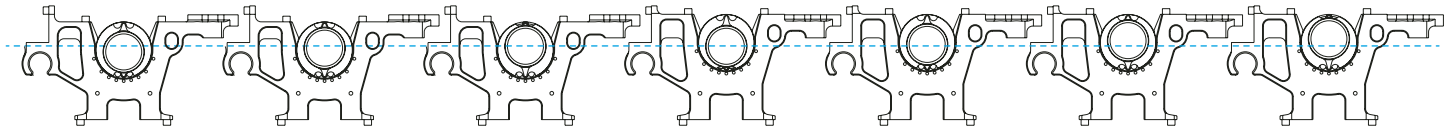
DIFF/SPOOL HEIGHT

See Pages 5 & 6 Steps 3 & 4

The Diff/Spool height can be adjusted in two ways.
• The eccentric housings can be rotated 180° to offer a 1mm shift in diff height.
• The Optional 'High' Transmission housings can be used to increase the Diff/Spool height by 2mm.
The low diff or spool position provides more grip at that end of the car, and is suited to low or medium traction conditions.

Diff Height	Eccentric Orientation	Eccentric Type	Transmission Housing Type
2.0mm	*Up ▲*	*+0.5mm (Option U8777)*	*High (Option U8729)*
1.5mm	*Up ▲*	*Kit*	*High (Option U8729)*
0.5mm	*Down ▼*	*Kit*	*High (Option U8729)*
0.0mm	*Down ▼/ Up ▲*	*+0.5mm (Option U8777)*	*High (Option U8729) or Low (Kit)*
-0.5mm	*Up ▲*	*Kit*	*Low (Kit)*
-1.5mm	*Down ▼*	*Kit*	*Low (Kit)*

-1.5mm DIFF or Spool Height +2.0mm



Diff Height: -1.5mm
Orientation: Down ▼
Eccentric Type: Kit
Trans Housing: Low (Kit)

Diff Height: -0.5mm
Orientation: Up ▲
Eccentric Type: Kit
Trans Housing: Low (Kit)

Diff Height: 0.0mm
Orientation: Up ▲
Eccentric Type: U8777 Option
Trans Housing: Low (Kit)

Diff Height: 0.0mm
Orientation: Down ▼
Eccentric Type: U8777 Option
Trans Housing: U8729 Option

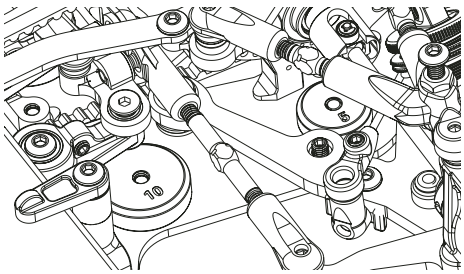
Diff Height: +0.5mm
Orientation: Down ▼
Eccentric Type: Kit
Trans Housing: U8729 Option

Diff Height: +1.5mm
Orientation: Up ▲
Eccentric Type: Kit
Trans Housing: U8729 Option

Diff Height: +2.0mm
Orientation: Up ▲
Eccentric Type: U8777 Option
Trans Housing: U8729 Option

WEIGHT DISTRIBUTION

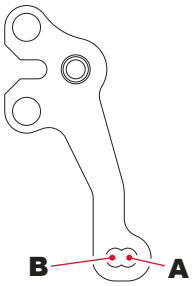
There are several positions intended for weight placement in the front and rear of the car. Please see the setup sheet for suggested placements. We recommend the use of U8773 and U8774 for this.
Please note that the mass damper (U8137) can be used within each wishbone (x4 places).
For the most neutral car balance, we recommend a 50:50 weight distribution. This is easily achieved with no weights and centrally placed electronics.
More rearwards weight generally gives a more agressive car with more steering.
More forwards weight generally gives a smoother car handling with less steering.

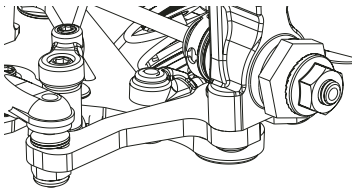


ACKERMANN

See Page 14 Step 14

The front steering arm features two positions for different Ackermann.
Position A provides the most Ackermann. This gives a smoother steering feeling and is the best option for an easier to drive car. This is the most common position and prefered by the team for most large outdoor tracks.
Position B provides the least Ackermann. This gives a more aggressive steering feeling and is the best option when more steering rotation is required. Best used when maximum mid corner steering is required. This is a good option for very technical outdoor tracks.

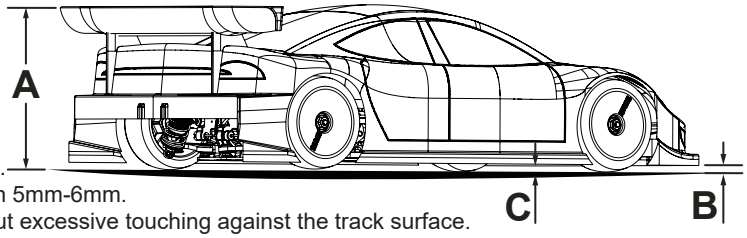




BODY HEIGHT

See Pages 25 & 26 Steps 23a & 23c

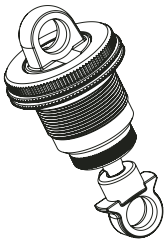
The height of the body is very important to performance.
Height 'A' must be between 110mm and 115mm. Higher here provides more rear grip and improved drivability. We suggest 113mm as a good starting height.
To set height 'B' (see page 12 to locate 'body stop screws')
1) Remove spring hangers from the body posts temporarily.
2) Adjust the body stop screws to set 'B' to between 2mm-4mm.
3) Fit body hangers to the posts to acheive a 'B' height between 5mm-6mm.
This allows to run the body lower to gain front downforce without excessive touching against the track surface.
If you prefer not to use the body stop screws, set 'B' to between 8mm-9mm.
Height 'C' should be cut to achieve a height of between 6mm-9mm. Adjust if exessive touching occurs.



SHOCK OIL

See Page 23 Step 20

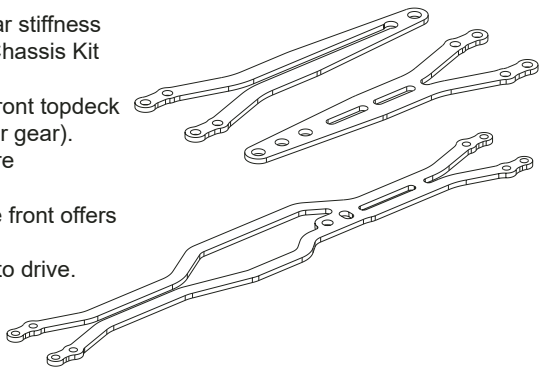
The aim is to achieve improved handling over bumps and control the weight transfer of the car.
If the track is particularly bumpy, increase the shock oil viscosity to help handling over bumps.
If the traction is low, lowering the shock oil to improve weight transfer and generate more grip.
If the traction is high, increasing the shock oil to make the car smoother and less unpredictable.
In higher temperature, increase the shock oil to manage tyre temperature.
Our suggested range is between 250cSt and 600cSt, when using Core-Rc shock oil with kit pistons.



TOP DECK FLEX OPTIONS

See Page 8 Step 6c

The C/F chassis kit includes a 1 piece topdeck with 2 stiffness screw options. The rear stiffness screw offers more flexibility. The front stiffness screw makes the chassis stiffer. (C/F Chassis Kit position).
The Aluminimum chassis kit includes a split S2, 2 piece 1.6mm topdeck design. The front topdeck has 2 dowels and screws. (Aluminium Chassis kit has only one screw nearest the spur gear).
Adding an additional dowel and screw into the forward position may make the car more responsive, but this option is rarely used by the team.
The rear top deck has 3 dowel/screw positions, the rear offering more stability and the front offers the most steering/rotation.
We also offer a 2.0mm, C/F version of the split topdeck which will make the car safer to drive.
All the top deck options are compatible with both chassis options.



UPPER INNER LINK LENGTH

See Page 9 Step 7a

The upper link length can be adjusted using speed secret CF link mounts - U8779, U8780, U8781.
These lengthen the upper link length by 1mm and are best suited to lower grip conditions or for providing more grip to the front or rear. (whichever end of the car they are fitted to.)