

# TRACK SETTINGS

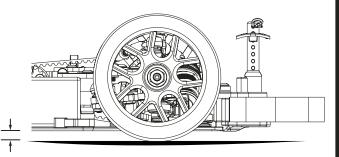
## **RIDE HEIGHT**

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. If you cannot achieve a low enough rear ride height, space up the rear shock mount.

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**

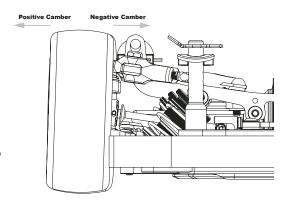
Front and rear camber is set by adjusting the pair of upper turnbuckles: Shorter turnbuckles= More Negative camber.

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.

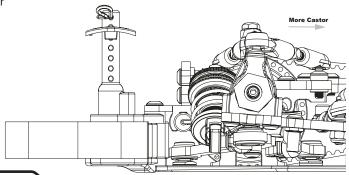


## **CASTOR**

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°.



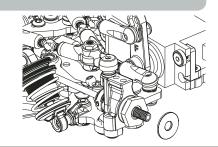
## **TRACK WIDTH**

The track width may be adjusted using 2 different hex widths, or shims:

U8333 - Wheel Hex Spacers 0.25, 0.5, 0.75mm

U8762 - Alloy Narrow Wheel Hex (-0.75mm)

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.



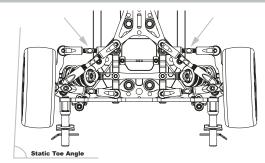


#### STATIC REAR TOE

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**

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.

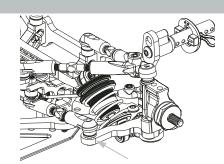
0mm gives a static rear toe setting when using kit roll centres.

3mm gives the most dynamic change. 0.75° extra toe in with full chassis compression.

The team recommend a range between:

3mm in low traction conditions or when lots of stability is needed. 0mm in high traction conditions or when lots of steering is needed.

Kit setting is 1mm.

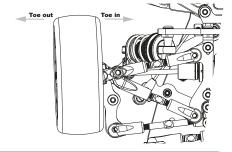


#### **FRONT TOE**

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

Shock springs are used to set the suspension stiffness.

The team recommend a starting setup using Core RC Green springs front and Grey rear (included).

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

Softer springs are suited better to low grip conditions. They 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.



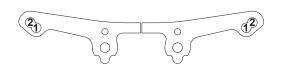
# **SHOCK ANGLES**

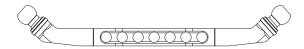
Similar to the shock spring setup, the shock angles can provide fine tuning over the suspnesion stiffness.

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

The rear shock angle is adjusted by adding/removing spacers from behind the ball.







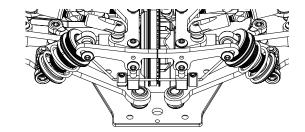
#### **ANTI ROLL BARS**

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**

The starting point for droop suggested by the team is 21.4mm rear, 22.4mm 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.

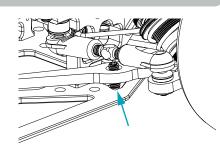
The suggested range is:

Rear- Between 20.4mm in low traction and 22.4mm in high traction.

Increasing the rear droop often provides more stability.

Front- Between 21.4mm in low traction and 24mm in high traction.

Increasing the front droop gives a more agressive handling.

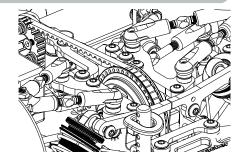


#### **UPPER INNER LINK HEIGHT**

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.

NOTE: The most rearward balls require an additional 2mm of spacers compared to the RF position to avoid pro-dive.



#### **LOWER WISHBONE SPACERS**

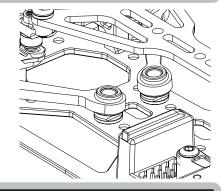
The kit setting is 1mm under all 8 wishbone lower balls, apart from FF position that has 0.5 mm.

As a rule:

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 is another team favourite. This creates some anti-dive, giving a much smoother steering, particularly on corner entry.



## **GEAR DIFF**

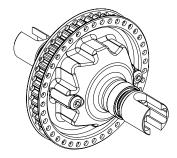
Gear diff oil can be changed to affect car handling.

Generally, high traction conditions = thicker oil. ( 300K +)

Low traction conditions = thinner oil. (100K-300K),

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 more traction.

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, and less traction





#### **DIFF HEIGHT**

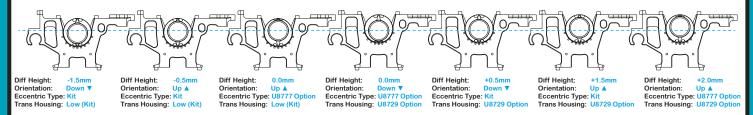
The Diff height can be adjusted in two ways.

- 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 height by 2mm.

The low diff position provides more grip at that end of the car, and is suited to low or medium traction conditions.

Diff Height	<b>Eccentric Orientation</b>	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 <b>▼</b>	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 <b>▼</b>	Kit	Low (Kit)

-1.5mm DIFF Height +2.0mm

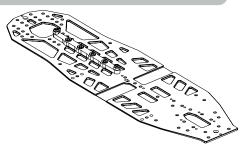


#### **CHASSIS FLEXIBILITY**

High grip conditions = Stiffer chassis setup. Low Grip conditions = Flexible chassis setup. The Alloy Chassis is the stiffest option. The C/F chassis is best in low/medium grip levels.

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

U9064 C/F Longitudinal Stiffness Brace increases rear chassis stiffness and creates more rotation and is intended for high grip conditions.



#### **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. For the most neutral car balance, we recommend the use of the kit bumper weights. This will provide a neutrally balanced car, with good steering. The weight distribution should be approximately 68% forwards. A range between 65% - 72% forwards weight distribution should be used, with 72% giving the most easy to drive car, at the expense of some steering/rotation. Extreme weight placement may be required to achieve this. Rearwards weight = a more aggressive car with more steering. Forwards weight = a smoother handling car, more stability, with less steering/rotation. Adding U9066 60g Front Weight Set is a great way of increasing from weight distribution, but keeping yaw interia down.

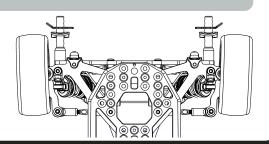
## **WHEELBASE**

The wheelbase of the FT9 is adjustable.

The rear wishbones can be moved forward or rearward 7mm from the kit-middle setting. The rear bulkheads must move together with wishbones.

#### In general:

A shorter car can rotate faster than a longer one, at the expense of traction. A longer car has better traction, at the expense of rotation.



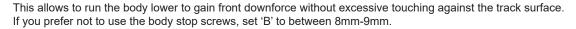


#### **BODY HEIGHT**

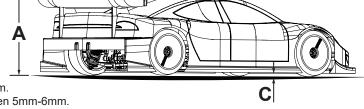
The height of the body is very important to performance. Increasing height 'A' provides more rear grip and improved drivability. We suggest 122mm as a good starting height, for most popular FWD bodyshells.

To set height 'B' (see page 9 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.



Height 'C' should be cut to achieve a height of between 6mm-9mm. Adjust if exessive touching occurs.



## **SHOCK OIL**

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.

- -250cSt, front and rear is a great starting point for low/medium grip conditions.
- -400cSt, front and rear is a great starting point for high/very high grip conditions.



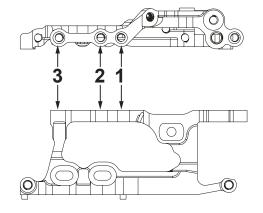
## **TOP DECK OPTIONS**

The rear top deck can be mounted to the transmission mount in three different places.

The rear hole (3) offers more stability, while the front hole (1) offers more steering and rotation.

The centre hole (2) gives a compromise of both.

Multiple holes can be used to provide more stability.



## FRONT UPPER INNER LINK LENGTH

The upper link length can be adjusted using speed secret CF link mounts - 1dot - U8781.

These shorten the upper link length by 1mm and are best suited to higher grip conditions. They will prevent some chassis roll and create less grip at whichever end of the car they are fitted to. Fitting to both front and rear will result in a freer car with more agility and rotation.

