B4.2 Setups - Ray Munday

12th March 2013

ray@rccar.com.au

		Standard Setup	Very Low Grip (Change from standard)	Very High Grip (Change from standard)	Very Bumpy (Change from standard)	Comment
FRONT SUSPENSION	Shock Mount Top / Bottom	Inner / Outer				Usually leave in this position.
	Camber Link Tower / Hub	Inner / Inner				Very rarely change. Lengthening gives less initial response, more mid/exit steering.
	Washers Inner	2mm	1mm			Less washers (higher roll centre) gives more aggressive initial turn-in but less mid corner. Good for slippery tracks.
	Camber	-1 deg	-0.5deg		-2deg to -3 deg	Less camber = more grip but less forgiving in bumps. **Very sensitive adjustment for bumpy tracks.**
	Steering Rack Position	Fwd				Usually use FWD position.
	Steering Washers Inner / Outer	- / 2 mm (Black ballstud inner)				More washers = more forgiving in bumpy corners.
	Axle Height	Middle (Hex)				Usually leave in middle position (if using hex conversion, middle position only option),
	Caster / Steering Block	30 deg / Trailing				Usually use 30 deg / trail (if using hex, trail only option). In-line steering is very aggressive.
	Toe In / Out	1 deg Out				Increase toe-out for better rotation in hairpins.
	Ride Height	24mm		23mm		24mm used most of the time. Higher ride height = more traction on slippery surface, but more chance of traction roll on grippy surface.
	Spring	AE BB Green	AE BB Black	AE BB White	AE BB Black if very bumpy	AE BB Green most of the time. Increasing front spring rate will smooth out steering on grippy surfaces.
	Oil / Piston	37.5 / 1.7mm (35 / 3hx1.4 option)		40 / 1.7	40 / 1.7 Tapered	Very rarely change unless track very grippy / flowing. Lighter oil = more aggressive steering, heavier oil = smoother.
	Limiters	2 x 0.03"		3 x 0.03"	1 x 0.03"	**Very sensitive adjustment.** More washers (less droop) decreases chassis roll, makes more stable on corner exit. Too many washers limits traction in bumps.
	Rebound	~1mm				Generally build BB shocks with no rebound.
REAR SUSPENSION	Shock Mount Top / Bottom	Inner / Inner				Very rarely change. Moving out on tower will give less rear side bight.
	Camber Link Inner / Hub	Inner / 2nd hole (A hub)				Very rarely change. Longer link will give more rear traction but less forgiving breakaway.
	Washers Inner	2mm				Very rarely change. Less washers gives more steering on power.
	Camber	-0.5 deg	0 deg		-2deg	Less camber = more grip but less forgiving in bumps. **Very sensitive adjustment for bumpy tracks.**
	Anti-Squat	2 deg				Rarely change. More anti-squat = more forward traction and higher jumping. Less anti-squat = more side bite and better acceleration in bumps.
	Toe In (Inner / Outer)	3 deg / 0 deg	3deg / 0.5deg			Add toe-in for very slippery conditions.
	WheelBase	Med	Short		Long	Shorter wheelbase = more weight on rear. Longer wheelbase = less weight on rear (see battery position below).
	Anti-Roll Bar	-				Very rarely use in Australia.
	Ride Height	24mm		23mm		24mm used most of the time. Higher ride height = more traction on slippery surface, but more chance of traction roll on grippy surface.
	Spring	AE BB Green		AE BB White	AE BB Black if very bumpy	AE BB Green used most of the time. If track grippy, can get excessive body roll which causes unpredictable spinout. Firmer rear spring (AE White) will smooth out cornering but if slippery track will reduce traction.
	Oil / Piston	32.5 / 1.7 (30 / 3hx1.4T option)	30 / 1.7	35 / 1.7	35 / 1.7 Tapered	32.5 / 1.7 most of the time. If track very rough, use tapered piston.
	Limiters	2 x 0.03"	1 x 0.03"		No limiters	**Very sensitive adjustment.** More washers (less droop) decreases chassis roll, gives better stability on turn-in / mid corner if grippy. If track bumpy, too many washers reduces traction in bumpy corners.
	Rebound	~1mm				Generally build BB shocks with no rebound.
TYRES	Front	See JC Tyre Chart	See JC Tyre Chart	See JC Tyre Chart (usually Bar Code)	See JC Tyre Chart	http://www.rctech.net/forum/10587840-post2.html
	Rear	See JC Tyre Chart	See JC Tyre Chart	See JC Tyre Chart (usually Bar Code)	See JC Tyre Chart	http://www.rctech.net/forum/10587840-post2.html
DRIVETRAIN	Motor	8.5 Novak Ballistic				8.5 used most of the time.
	Timing / Rotor	30 deg / 12.3mm	20deg	35deg	15deg	Increase timing for more power / top end. Reduce timing for less wheelspin / better driveability.
	Pinion / Spur	24 / 75				Use smallest combination of pinion / spur to bring motor further forward.
	Ratio	8.125				
	Driveshafts	CVA				
ELECTRONICS	Radio	KO EX-1 KIY				
	EPA Brake	Just stop wheel lockup in straight line				Tune brake EPA to just stop wheel lockup on straight from high speed. May change from race to race - check on warm up lap.
	EXPO Steer / Throttle / Brake	0 / -15% / 0				
	Receiver	KO KR-411 FHSS				
	Servo	KO RSX Response				Note: RSX servo weight ~70g. Check ballast below.
	ESC / Fan	Novak Pulse				
	Firmware	X-Drive				
	Profile / Wire Gauge	Linear / 12 Ga				
	Drag Brake Y/N, Initial %	18%	30%	12%		Increase drag brake for more steering on slippery surfaces. Reduce drag brake if track very grippy.
	DeadBand % / Min Drive%	2% / 0%				
	Drive / Brake Frequency (kHz)	32kHz / 2,25 kHz				
	Max Brake	75%				
	Advance / RPM / Max RPM	None		Consider 20deg @ 19-29K RPM (if smooth)		
	Battery Placement	Thick pad Front, Thin pad rear	Rear	Front	Front	**Makes a massive difference. This affects weight distribution.** Leave in the middle for most conditions. For high grip and/or sweeping corners, move to the front. Battery at rear gives more forward traction, more rotation in middle of corner but more understeer on power. For very bumpy tracks, weight forward helps to stop wheelstanding.
	Battery	REEDY LIPO (~300g)				Use ballast under battery to get weight to 300g.
AERO / CHASSIS	Body	JConcepts Finnisher B4.1				
	Wing	JConcepts 6.5" Hi-Clearance	Jconcepts 7" Hi-Clearance	Concepts 6.5" Hi-Clearance		
	Wing Lip / Angle	1/2" / 6 deg				Use plastic spacers on top of wing to provide more secure fit.
	Chassis / Fr & Rr Arms	+8mm Chassis		Carbon front arms if hot / high grip		Use B4.1 plastic parts most of the time. If high grip / hot weather, carbon front arms help smooth out steering.
	Ballast	AE Ballast weight behind Battery, 5g rear triangle. 10g to servo (servo + weight = 70g)	10g each rear triangle.	10g front bulkhead, additional 10g in front of servo if needed.	10g front bulkhead, additional 10g in front of servo (as needed to stop wheelstand)	**Makes a massive difference. This affects weight distribution.** For high grip and/or sweeping corners, add weight. For very slippery conditions, remove front ballast. For very bumpy conditions, tune to minimise wheelstand under power. Note: 10g at the front is similar to moving battery from full rear to full front.