AMS 2 Set up help

Suspension

Caster angle: Angular displacement of the steering axis from the vertical axis of one of the wheels.
Higher value > Harder to turn the wheel in, but the more directness you get from the steering wheel.
Lower value > Easier to the turn wheel in, less directness and steering feels a bit heavier too.

Camber angle: Camber is the inward or outward tilt of the front tires as viewed from the front.
Less negative > Less lateral grip, but more longitudinal grip while breaking and accelerating (Spreading more equal lower tyre temp)
More negative > More turn in/lateral grip, less longitudinal grip while breaking and accelerating (Higher tyre temp)

Spring rate/wheel rate: Spring force multiplied by the install ratio of the suspension:
Raising value > Stiffen suspension, more direct and precise handling with fast reactivity.
Lowering value > Soften suspension, more slow and predictable handling.
Note: It can be a good idea to have stiffer springs in the front, pushing the car on the ground at high speeds and generating more stability and mid corner grip but also making it more understeer.

Bump Stop: creates a force to slow the speed of the suspension in compression (bump) when slow movements occur/weighht transfer (roll, pitch) **(Compression of spring)**
Higher value front > Car becomes more reactive giving better feeling and precisionnn, stability under breaking but also higher tyre temps and wear.
Lower value front > Car more predictable but slower in reactions, less precision and less stability under breaking with lower tyre temps and wear.
High value rear > Car more reactive giving better feeling and precision, but also gives more oversteer under acceleration or at the moment you release brakes entering a turn (H temps and wear)
Lower value rear > Car more predictable but slower in reactions, less precision when drifting but also more traction and more stability the moment you release the brakes entering a turn (LT and W)

Slow Bump: controls the dynamic weight transfer and overall motion of the main chassis relative to the track surface when car turns, slows, and accelerates. **(Compression of spring)**

Increase slow bump value > Car reacts quicker and sharper in response to driver inputs, resulting in more responsive car when changing direction. When accelerating powering the chassi forward increases movement.

Decrease slow bump value > Car reacts quicker and sharper in response to driver inputs, resulting in more responsive car when changing direction. When accelerating powering the chassi forward increases movement.
Note: Too much slow bump, can reduce mechanical grip, causing more "snappy" behaviour. It can also result in a car that is prone to sudden understeer when the front is too stiff, or oversteer when the rear is too stiff

Fast Bump: Creates a force to slow the speed of the e e suspension in compression (bump) when fast movements occur, primarily road irregularities and kerbs **(Compression of spring)**
Higher value F/R > Makes the suspension absorb less the impact from a kerb but also keep the spring compresson limited which can be usseful as you don't want the spring too gain much energy and bounce back violently after a bump, makes a front end a bit nervous over kerbs and bumps
Lower value F/R > Makes the suspension capable of absorbing more energy on bumps and kerbs but then you need to make sure it wont bounce down again upsetting the car.

Slow Rebound: Controls how the suspension extends back to its normal position after being compressed. **(Decompression of spring, Ex: When car roll/pitching back up again under breaking/accelerating)**
Increase value > If the front nose pops back up too quick. Front, car more stable under accel. and fast change of direction like chicanes. Rear, help to some degree to stabilise under braking and initial turn in, also more agile on slow turns when the whole car needs to rotate.
Decreasing valuee > If losing the rear when applying power of the corner you may consider reducing the value. Front, car understeer less under accel. More sluggish on changing direction. Rear, car more stable at initial turn in, can provoke inertia movements of the rear end on chicanes and fast direct changing.

Fast Rebound: **(Decompression of spring, rule of thumb: this should be used to counter balance fast bump, ex: Less fast bump compression, more fast rebound and vice-versa)**
Higher value F/R > Suspension extension slower, limiting the shock the tyres get from the energy of a compressed spring, too high and the suspension might not have time to extend again after a kerb. Good for aerodynamics, bad for for next bump no suspension travel.
Lower value F/R > Suspesnion extends more freely, but can also provoke a bouncing of the tyre contact on the ground makig thefront end lose grip on bumps and kerbs.

Suspension Centre F/R

Toe in angle F/R : Increased value > faster turn in, instability under breaking and less temperature. Also more drag and friction at high speed in long straights more tyre wear.
Toe in angle F/R : Decrease value > Slower turn in, more stability under braking and more temperature. Less friction and drag at high speed long straights and less tyre wear.
Note: A value of 0 (zero) can give you higher speed and lower temperature.

Anti-roll-bar F: Raise value > Car roll less and gain stability, precision and fast turn in. Usually comes with some loss of front end grip too depending on suspesnion geometry.
Anti-roll-bar F: Lower value > Car roll more, better mid turn grip, but lose precision and agility and slower turn in.
Anti-roll-bar R: Raise value > Car roll less and becomes more reactive on drivers inputs. Might lose grip, not always the case and again depending on suspension geometry.
Anti-roll-bar R: Lower value > Car roll more, better traction, but lose reactivity and agility, slower turn in.
Note: **Front,** keep higher values on tracks with lots of bumps and kerbs to aid stability. **Rear,** keep lower values on tracks with lots of bums and kerbs to aid stability.

Drivetrain/Chassi

Radiator opening: More you open more drag and the slower you go.
Coast Ramp: Controls rotational lock between the two rear tyre axles when off power. Higher values allow wheels to spin independently and car rotate into corners more easily.
Power Ramp: Use a power ramp angle to give enough locking effect so that excess wheelspin is prevented on corner exit. Bear in mind the engine power when setting this value: an engine with low power may want lower, more aggressive ramp angles, as there is less torque to turn into a locking effect from the start.
Preload: Alters the rate switch between the power ramp and the coast ramp. The lower the more nervous and twitch the car becomes, but more responsive it becomes. The higher the easier less responsive to driver inputs it becomes overall.
Engine map: Change engine calibration, more or less fuel. Higher map settings less fuel burned and less power produced.
Engine limiter: Controlling engine revs, more revs less life and vice-versa.