



2025 Rules

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Introduction

Welcome to 86 Challenge. Drivers of all skill levels are welcome and there is no charge to participate.

See 86challenge.us for more information, including schedule, historical results, and forms for registering for GT Radial's Championship Cash Prize and tire contingency program.

Questions, corrections, and clarifications can be raised on our [Facebook Group](#) or [Discord server](#).

Significant additions or changes for the 2025 season are **highlighted**.

1. General Rules

1.1. Chassis must be one of the following (hereafter referred to by its *Designation*):

Designation	Chassis
Gen. 1	<ul style="list-style-type: none">• 2012–2016 Scion FR-S• 2012–2020 Subaru BRZ• 2017–2020 Toyota 86
Gen. 2	<ul style="list-style-type: none">• 2022+ Subaru BRZ• 2022+ Toyota GR86

1.2. Registration

1.2.1. Registration with 86 Challenge (separate from buying a ticket with the trackday organizer) must be submitted by the end of the day following a given event. Registering before the event begins is recommended.

1.3. Timing

1.3.1. The following timing methods are accepted. Priority is given from top to bottom if more than one method is available for a given lap:

Timing Method	Time Penalty (s)
Official timing transponder	0.0

Timing Method	Time Penalty (s)
Data logger with at least 10Hz GPS (e.g. AiM, Racebox)	0.2
Data logger with at least 1Hz GPS (e.g. smartphone)	0.5
Unedited onboard video (may be accepted for a driver's first event only)	0.5

- 1.3.2. **Multiple run groups:** For drivers participating in multiple run groups (in a single cycle of run groups), their time will be taken from the highest run group, according to the following order. (If run groups are further divided into fast/slow, the faster run group is considered higher.)

- 86 Challenge (dedicated run group)
- Open Passing
- Intermediate/Mixed Passing
- Novice
- Beginner

- 1.3.3. **Tiebreaker:** If competitors have identical times, times set earlier ranks above times set later

1.4. Classes

- 1.4.1. Cars will be classed according to rules and modification points listed in the following sections

- 1.4.2. A car may be shared by different drivers. Please enter one event registration per driver and indicate the run group each driver is participating in.

- 1.4.3. A driver may run in a higher class than their modification points dictate

- 1.4.4. A driver may only compete in one class during a single event

- 1.4.5. If a driver moves to a different class during a season, the points earned in the previous class will *not* be carried over to the new class. Drivers may choose to not earn points in the new class and keep the points in the previous class. Drivers cannot participate in the GT Radial Championship Prize in multiple classes in a season.

1.5. Championship Scoring

- 1.5.1. Championship points are awarded at the end of each event according to the chart below:

Finish Position	Points
1st	10
2nd	7
3rd	5
4th	4
5th	3
6th	2
7th+	1

- 1.5.2. **Best of 7:** At the end of the season, the driver with the most points from 7 of the best scores out of 10 events wins the championship

- 1.5.3. **Tiebreaker:** Championship ties are broken via finishing position countback: The competitor with the most 1st place finishes wins. If still tied, the countback moves to 2nd place, 3rd place, and all subsequent finishing positions. If still tied, the competitor who held a lead last wins.

1.6. In-Season Rule Changes

- 1.6.1. Changes which make the rules more *restrictive* will be announced 60 days ahead of enforcement

- 1.6.2. Changes which make the rules more *permissive* may be enforced immediately

- 1.6.3. All rule changes will be announced and will include the date on which become effective

1.7. Protests

- 1.7.1. A competitor may protest the results of an event to the Rules Board if they believe a competitor was out of compliance with the rules
- 1.7.2. The Rules Board will review the protest and may move a competitor to a different class or invalidate their results for one or more events
- 1.7.3. After the first event of new season, the previous season's results are final

2. GT Radial Stock Class

Designed to keep costs to a minimum and be attractive to drivers with nearly-stock vehicles. Participants are eligible for GT Radial Championship Cash Prizes and GT Radial Tire Contingency.

- 2.1. Vehicles in this class are only allowed performance modifications included in this section
- 2.2. In order to balance performance between Gen. 1 and Gen. 2 cars, a time handicap will be added to Gen. 2 lap times, according to the table below. For any tracks/configurations not listed below, the closest comparable track configuration will be used

Track	Handicap Time (s)
Buttonwillow Raceway #1	2.5
Buttonwillow Raceway #13	2.0
Buttonwillow Raceway New Track	1.5
Laguna Seca	2.5
Sonoma Raceway	2.5
Thunderhill 5-mile Bypass	4.0
Thunderhill East	2.5
Thunderhill West	1.5

2.3. Engine & Powertrain

- 2.3.1. Engine software must be OEM
- 2.3.2. Engine oil coolers, accumulators, and/or sump changes are allowed
- 2.3.3. Gen. 2 intake charcoal filters shall be present and unaltered
- 2.3.4. Transmission and diff oil coolers are allowed
- 2.3.5. Any pump gasoline (including blending high-octane gasoline) is allowed

2.4. Alignment

- 2.4.1. Front camber shall not exceed (be more negative than) -2.5 degrees
- 2.4.2. Front camber may be adjusted using only the following parts:

Description	Allowed Parts
Crash bolt (i.e. 14mm lower bolt used in upper position)	<ul style="list-style-type: none"> • Toyota SU003-02818 • Subaru 901000394
Camber bolts (in either/both positions)	<ul style="list-style-type: none"> • SPC 81280 • SPC 81305 • Whiteline KCA416 • Whiteline KCA414 • Eibach 5.81305K
Front Strut Mounts	<ul style="list-style-type: none"> • Pedders PED-580096 • Whiteline KCA335
Camber plates	<ul style="list-style-type: none"> • Any

- 2.4.3. Rear camber with stock, unmodified, and undamaged components is not restricted
- 2.4.4. Rear camber with adjustable components shall not exceed -2.0 degrees
- 2.4.5. Rear camber may be adjusted using only the following parts:

Description	Allowed Parts
OEM-style, adjustable, stamped steel rear lower control arms	<ul style="list-style-type: none"> • SPC 67660 • Moog RK100136 • Whiteline KTA216A
Camber bolts	<ul style="list-style-type: none"> • H&R TC112

- 2.4.6. Toe angle may be adjusted without limitation
- 2.4.7. Cutting or bending of any vehicle sheet metal or suspension components to change alignment or ride height is not allowed

2.5. Wheels

- 2.5.1. Wheels must have a maximum width of 8.0 inches
- 2.5.2. Wheel spacers are allowed

2.6. Tires

- 2.6.1. Tires must be one of the following:

Models	Sizes
GT Radial Champiro SX2 or HPY	<ul style="list-style-type: none"> • 215/45R17 • 225/45R17
Michelin Primacy HP (OEM)*	<ul style="list-style-type: none"> • 215/45R17
Michelin Pilot Sport 4 (Gen. 2 OEM)*	<ul style="list-style-type: none"> • 215/40R18

* OEM tires are only allowed for a competitor's first 2 events. Points earned with OEM Michelin tires will not be eligible toward GT Radial tire contingency nor toward GT Radial Championship Cash Prize

2.7. Aero

- 2.7.1. STI lip and TRD lip are not allowed
- 2.7.2. Gen. 1 BRZ tS wing is not allowed
- 2.7.3. Gen. 2 ducktails (OEM or equivalently-sized) are allowed

2.8. Safety

- 2.8.1. Any safety device may be used
- 2.8.2. Cars equipped with a full aftermarket safety system (bucket seats, racing harnesses, neck restraint system, full or half roll cage, etc.) are allowed, as long as total curb weight of the car remains above 2800 lbs without driver and with a full tank of fuel. The car will need to be weighed at a location approved by the Rules Board before it is allowed to enter Stock Class.

2.9. Misc

- 2.9.1. Braking upgrades are allowed
- 2.9.2. Replacing OEM parts with newer/older OEM parts is allowed (e.g. dampers, sway bars, etc)
- 2.9.3. No lightweight replacement parts are allowed (e.g. battery or lighter-than-OEM trunk) or removal of parts allowed
- 2.9.4. Removal of spare tire, floor mats, and tools is allowed
- 2.9.5. OEM-style, non-rebuildable, off-the-shelf dampers are allowed as long as they have: non-adjustable damping, non-adjustable ride-height, and unaltered valving

2.9.6. Non-OEM cat-back exhaust with a weight greater than 32 lbs is allowed (removal of any catalyst is prohibited)

3. GT Radial Street Class

Allows moderate modification flexibility and balances competition between generations through Modification Points. Participants are eligible for GT Radial Championship Cash Prizes and GT Radial Tire Contingency.

3.1. Drivers are allotted 3 modification points according to [Modification Points](#)

3.2. Any performance modification not listed in [Modification Points](#) is prohibited.

3.3. Minimum weight is 2800 lbs without driver and with a full tank of gas

3.4. Wheels

3.4.1. Wheels must have a maximum width of 9.0 inches

3.5. Tires

3.5.1. Tires must be one of the following:

Models	Sizes
GT Radial Champiro SX2 or HPY	• 17" only with 245mm maximum width
Michelin Primacy HP (OEM)*	• 215/45R17
Michelin Pilot Sport 4 (Gen. 2 OEM)*	• 215/40R18

* OEM tires are only allowed for a competitor's first 2 events. Points earned with OEM Michelin tires will not be eligible toward GT Radial tire contingency nor toward GT Radial Championship Cash Prize

4. Touring Class

Allows significant modification freedom, with a balance of performance handicap based on Modification Points. Participants are eligible for GT Radial Tire Contingency.

4.1. Drivers are allotted 10 modification points according to [Modification Points](#)

4.2. Maximum tire width: 255 mm

4.3. Minimum weight is 2750 lbs without driver and with a full tank of gas

4.4. Event standings will be determined by *Adjusted Track Time*, as defined below:

$$\text{Adjustment Factor} = \frac{\text{Street Class record at event track}}{\text{Street Class record at Thunderhill East Bypass}}$$

$$\text{Touring Handicap} = \text{Adjustment Factor} \times \max(0, \text{Modification Points} - 3)$$

$$\text{Adjusted Track Time} = \text{Raw Time} + \text{Touring Handicap}$$

4.5. You can use the following table to find the *Touring Handicap* given Modification Points and a track:

Track / Mod Points	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Thunderhill West	0	0.3	0.7	1	1.4	1.7	2.1	2.4	2.8	3.1	3.5	3.8	4.1	4.5	4.8
Thunderhill East	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7
Thunderhill 5-Mile	0	0.8	1.7	2.5	3.3	4.1	5	5.8	6.6	7.4	8.3	9.1	9.9	10.7	11.6
Sonoma	0	0.5	0.9	1.4	1.8	2.3	2.8	3.2	3.7	4.1	4.6	5.1	5.5	6	6.4
Buttonwillow	0	0.5	1	1.5	1.9	2.4	2.9	3.4	3.9	4.4	4.9	5.3	5.8	6.3	6.8
Laguna Seca	0	0.4	0.8	1.3	1.7	2.1	2.5	2.9	3.3	3.8	4.2	4.6	5	5.4	5.8

5. Unlimited Class

Allows unconstrained builds to achieve the ultimate 86 lap times. For people who don't like to conform to rules!

5.1. Anything goes!

6. Modification Points

This section applies only to GT Radial Street Class and Touring Class.

Chassis

Points	Chassis
0	Gen. 1 (2013–2020 model years)
2	Gen. 2 (2022+ model years)

Tires

Any tire not on this list is automatically 6pts

Points	Modifications
-1	<ul style="list-style-type: none"> • 17" GT Radial SX2 • 17" GT Radial HPY • 17" Michelin Primacy HP
0	<ul style="list-style-type: none"> • Michelin Pilot Sport 4 (OEM size only 215/40R18) • Yokohama Advan Apex V601
1	<ul style="list-style-type: none"> • 18" GT Radial SX2 • GT Radial SX2 RS
2	<ul style="list-style-type: none"> • Continental ExtremeContact Sport (ECS) • Dunlop Direzza ZII Star Spec • Dunlop Direzza ZIII • Falken Azenis RT615K • Federal 595 RS-RR • Goodyear Eagle F1 Supercar 3 • Hankook Ventus RS-4 • Kumho Ecsta V730 • Maxxis VR-1 • Michelin Pilot Sport 4S • Michelin Pilot Sport Cup 2 (180TW) • Michelin Pilot Sport Cup 2 Connect • Nankang NS-2R • Nexen N'fera SUR4 • Nitto NT01 • Nitto NT05 • Toyo Proxes R888 • Yokohama Advan AD08R
3	<ul style="list-style-type: none"> • BFGoodrich g-Force Rival S • Bridgestone Potenza RE71R • Bridgestone Potenza RE71RS • Continental ExtremeContact Force (ECF) • Falken Azenis RT660 • Goodyear Eagle F1 Supercar 3R • Maxxis Victra RC-1 • Maxxis Victra VR2 • Nankang AR-1 • Nankang CR-1 • Nexen N'Fera SUR4G • Yokohama Advan A052
5	Treadwear 40–99
6	Racing slicks or any tire not listed above

Engine Mechanical & Drivetrain

Take points for EACH applicable row:

Points	Modifications
0	<ul style="list-style-type: none"> • Removal of intake resonators • Any drop-in replacement air filter for OEM intake • Gen. 2 charcoal airbox filter removal • Aftermarket radiator, oil cooler, oil catch can, oil pan baffle, and/or modified sump • Any transmission cooling or diff cooling system • Any cat-back exhaust • Any pump gasoline (including blending high-octane gasoline)
0.5	Aftermarket intake, header, front-pipe, overpipe, and/or any removal of OEM catalytic converter
0.5	Lighter-than-OEM rotational inertia flywheel, clutch, and/or driveshaft
0.5	Non-OEM limited slip differential
1	Non-OEM transmission
2	FA20 to FA24 engine swap
5	Forced induction (FI)
TBD	Any other engine swap (contact Rules Board for individual engine swap classification)

Engine Tuning

Take points for ONE of the following:

Octane ratings below use (RON+MON)/2, or AKI. This is the octane number displayed at the pump in the US.

Points	Modifications
0	<ul style="list-style-type: none"> • OEM tune • FI tune for 93 octane gasoline or lower (only when taken with 5 point FI modification)
0.5	NA tune for 93 octane gasoline or lower (non-OEM)
1.5	NA tune for greater than 93 octane gasoline or greater than 15% ethanol content
2	FI tune for greater than 93 octane gasoline or greater than 15% ethanol content

Front Aero

Take points for EACH applicable row:

Points	Modifications
0.5	Canards, dive planes, hood vents, fender vents, and/or vertical deviations on splitters

And take points for ONE of the following:

Points	Modifications
0	Any device extending less than 50mm forward/outward/rearward from the bottom leading edge of the bumper (including STI lip and TRD lip))
1	Any device extending 50-74mm forward/outward/rearward from the bottom leading edge of the bumper
1.5	Any device extending 75-124mm forward/outward/rearward from the bottom leading edge of the bumper
3	Any device extending greater than 125mm forward/outward/rearward from the bottom leading edge of the bumper

Underbody Aero

Take points for EACH applicable row:

Points	Modifications
0.5	Any rear diffuser extending forward of the rear axle or backward beyond the rear bumper

Rear Aero

Take points for ONE of the following:

Points	Modifications
0	OEM rear spoiler, OEM wing (except Gen. 1 BRZ tS wing), or any aftermarket spoiler less than 60mm in height
0.5	Aftermarket rear spoiler greater than 60mm in height
1	Gen. 1 BRZ tS wing, SARD LSR, or any wing with max width of 1400mm
1.5	APR GTC-200, Voltex Type 12, or any wing with max width of 1460mm
2	Any wing wider than 1460mm, higher than 245mm, or chord length >250mm

Suspension

Take points for EACH applicable row:

Points	Modifications
0	<ul style="list-style-type: none">Any spherical bushings including strut top mountsAny alignment bolt/kit, bump steer kit, tie rod end, roll center adjusterAny bolt-on chassis bracingAny sway barsOEM-style, non-adjustable dampers, with fixed spring perches
0.5	Non-OEM springs
0.5	Adjustable dampers (valving or ride height) or modification to off-the-shelf damper valving
0.5	Remote reservoirs

Weight Reduction

Take points for EACH applicable row:

Points	Modifications
0	Any lightweight battery
1	Removal of any interior trim pieces or seating not required for installation of a roll cage

Safety

Take points for EACH applicable row:

Points	Modifications
0	<ul style="list-style-type: none">Any in-cabin safety equipmentAftermarket brake calipers, rotors, pads, or brake ducting