



2025 Rules

Version 2025.1

Released October 31, 2024

Significant additions or changes are highlighted.

Contents

| | |
|--|-----|
| General Rules | (1) |
| GT Radial Stock Class | (3) |
| GT Radial Street Class | (5) |
| Touring Class | (5) |
| Unlimited Class | (6) |
| Modification Points | (6) |
| Chassis | (6) |
| Tires | (6) |
| Engine Mechanical & Drivetrain | (7) |
| Engine Tuning | (7) |
| Aero: Splitters/Lips | (8) |
| Aero: Wings/Spoilers | (8) |
| Aero: Other | (9) |
| Suspension | (9) |
| Weight Reduction | (9) |
| Safety | (9) |

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 [Discord Server](#) or [Facebook Group](#).

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. Drivers must register for 86 Challenge prior to the start of each event (separate from buying a ticket with the trackday organizer). The registration form is made available on 86challenge.us 1 week before each event. In case of multiple submissions, the latest will be used.
- 1.2.2. Late registrations may be accepted on a case-by-case basis, but a driver registering late may not change to a different class from their previous event or previous registration for the same event.
- 1.2.3. Drivers may share a car. Each driver must register separately, indicating the class *and* run group they will participate in. Drivers sharing a car may not switch drivers during a single session.

1.3. Timing

- 1.3.1. The following timing methods are accepted (see table below). 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 |
| Lap timer with at least 10Hz GPS (e.g. AiM, Racebox, Catalyst) | 0.2 |
| Lap timer with at least 1Hz GPS (e.g. built-in smartphone GPS) | 0.5 |
| Unedited onboard video (may be accepted for a driver's first event only) | 0.5 |

- 1.3.2. **Tiebreaker:** If multiple competitors have identical times in an event, the tie is broken by comparing each driver's second fastest lap, then third fastest lap, and so on.

1.4. Scoring

- 1.4.1. Points are awarded at the end of each event according to the table below:

| Finishing Position | Points |
|--------------------|--------|
| 1st | 10 |
| 2nd | 7 |
| 3rd | 5 |
| 4th | 4 |
| 5th | 3 |
| 6th | 2 |
| 7th+ | 1 |

- 1.4.2. Separate points tallies are used to track championship standings and tire contingency:

| Type | Definition |
|----------------------------|--|
| Total Points | The sum of a driver's points earned from all events |
| Championship Points | The sum of a driver's 7 best finishes, only from the class the driver is participating in for the championship (see Changing Classes) |
| Tire Points | The sum of a driver's points earned satisfying the terms of the GT Radial Tire Contingency program |

- 1.4.3. **Changing Classes:** If a driver changes classes during a season, they can choose to:
 - Keep the *Championship Points* earned in their previous class and not earn *Championship Points* in the new class; or,
 - Forfeit the *Championship Points* earned in their previous class and earn *Championship Points* in the new class.
- 1.4.4. The per-class standings are determined by *Championship Points* (most points wins).
- 1.4.5. **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.

1.5. In-Season Rule Changes

- 1.5.1. All rule changes will be announced on our [Discord Server](#) and [86challenge.us](#). Announcements will include the date on which changes become effective.
- 1.5.2. Changes which make the rules more *restrictive* will be announced 60 days before enforcement.
- 1.5.3. Changes which make the rules more *permissive* may be enforced immediately.

1.6. Protests

- 1.6.1. 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.
- 1.6.2. 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.
- 1.6.3. Results are final and no further protests will be accepted once the season-ending award ceremony has begun.

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. **Time Handicap:** 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. The same handicaps are used whether the track is run in the clockwise or counterclockwise direction. For any tracks/configurations not listed below, the closest comparable track configuration will be used.

| Track | Time Handicap (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 | 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. Oil coolers, **catch cans**, accumulators, and/or sump changes are allowed.
- 2.3.3. Gen. 2 only: intake charcoal filters shall be present and unaltered.
- 2.3.4. **Any pump gasoline (including blending high-octane pump gasoline) is allowed.**

2.4. Wheels

- 2.4.1. Wheels must have a maximum width of 8.0 in.
- 2.4.2. Wheel spacers are allowed.

2.5. Tires

- 2.5.1. 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. Competitors will not earn Tire Points while using OEM tires.

2.6. Alignment

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

| Description | Allowed Parts |
|---|---|
| Crash bolt (i.e. 14 mm 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 / camber plates | <ul style="list-style-type: none"> • Pedders PED-580096 • Whiteline KCA335 |

- 2.6.2. Rear camber with stock, unmodified, and undamaged components is not restricted.

- 2.6.3. Rear camber with adjustable components shall not exceed –2.0 degrees. 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 |

- 2.6.4. Toe angle may be adjusted without limitation.

- 2.6.5. Cutting or bending of any vehicle sheet metal or suspension components to change alignment or ride height is not allowed.

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 vortex generators are not allowed.
2.7.4. 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 may be equipped with aftermarket safety systems (bucket seats, racing harnesses, neck restraint system, full or half roll cage, etc.), as long as total curb weight of the car remains above 2800 lbs without driver and with a full tank of fuel. Removing interior trim is allowed only as necessary to install the safety systems. The car must 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).
- 2.9.4. Removal of parts is prohibited, except the following: spare tire, floor mats, and included tools.
- 2.9.5. OEM-style, off-the-shelf dampers are allowed as long as they have: non-adjustable damping, non-adjustable ride-height, and unaltered valving.
- 2.9.6. Replacement of the OEM catback or axleback exhaust is allowed only using the following parts:

| Description | Allowed Parts |
|-------------|---|
| Catback | <ul style="list-style-type: none"> • AWE Touring Edition • CSG Spec Touring • GR Performance • GReddy Supreme SP • Perrin 2.5" Dual Tip • TRD Performance • Yonaka Stainless |
| Axleback | <ul style="list-style-type: none"> • DC Sports • STi Performance Muffler |

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](#).
- 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 in.
- 3.5. **Tires**
 - 3.5.1. Tires must be one of the following:

| Models | Sizes |
|--------------------------------------|---|
| GT Radial Champiro SX2 or HPY | • 17" with 245 mm maximum section 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. Competitors will not earn Tire Points while using OEM tires.

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](#).
- 4.2. Maximum tire section width is 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* (s), given *Modification Points* and track.
(Builds with 3 points or fewer receive a 0 s handicap.)

| 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 |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| Buttonwillow | 0.0 | 0.5 | 1.0 | 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 | 0.4 | 0.8 | 1.3 | 1.7 | 2.1 | 2.5 | 2.9 | 3.3 | 3.8 | 4.2 | 4.6 | 5.0 | 5.4 | 5.8 |
| Sonoma | 0.0 | 0.5 | 0.9 | 1.4 | 1.8 | 2.3 | 2.8 | 3.2 | 3.7 | 4.1 | 4.6 | 5.1 | 5.5 | 6.0 | 6.4 |
| Thunderhill 5-Mile | 0.0 | 0.8 | 1.7 | 2.5 | 3.3 | 4.1 | 5.0 | 5.8 | 6.6 | 7.4 | 8.3 | 9.1 | 9.9 | 10.7 | 11.6 |
| Thunderhill East | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 |
| Thunderhill West | 0.0 | 0.3 | 0.7 | 1.0 | 1.4 | 1.7 | 2.1 | 2.4 | 2.8 | 3.1 | 3.5 | 3.8 | 4.1 | 4.5 | 4.8 |

- 4.6. Any new tracks/configurations will have their *Adjustment Factor* and *Touring Handicap* calculated immediately following the event using the just-set Street Class record. Existing tracks/configurations will use the *Adjustment Factor* as defined in the beginning of the season.

5. Unlimited Class

Allows unconstrained builds to achieve the ultimate 86 lap times. For people who don't like 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 | <table border="0"> <tr> <td> <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 Victra VR-1 </td> <td> <ul style="list-style-type: none"> • Michelin Pilot Sport 4S • Michelin Pilot Sport Cup 2 (180TW) • Michelin Pilot Sport Cup 2 Connect • Nankang NS-2R • Nexen Nfera SUR4 • Nitto NT01 • Nitto NT05 • Toyo Proxes R888 • Yokohama Advan AD08R </td> </tr> </table> | <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 Victra VR-1 | <ul style="list-style-type: none"> • Michelin Pilot Sport 4S • Michelin Pilot Sport Cup 2 (180TW) • Michelin Pilot Sport Cup 2 Connect • Nankang NS-2R • Nexen Nfera SUR4 • Nitto NT01 • Nitto NT05 • Toyo Proxes R888 • Yokohama Advan AD08R |
| <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 Victra VR-1 | <ul style="list-style-type: none"> • Michelin Pilot Sport 4S • Michelin Pilot Sport Cup 2 (180TW) • Michelin Pilot Sport Cup 2 Connect • Nankang NS-2R • Nexen Nfera SUR4 • Nitto NT01 • Nitto NT05 • Toyo Proxes R888 • Yokohama Advan AD08R | | |

| Points | Modifications |
|--------|--|
| 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

Free Modifications

- 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 pump gasoline)**

Take points for EACH applicable row:

| Points | Modifications |
|----------|---|
| 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

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

Take points for ONE of the following:

| Points | Modifications |
|--------|--|
| 0 | OEM tune or forced induction tune for 93 octane gasoline or lower (only when taken with 5 point FI modification) |
| 0.5 | Naturally aspirated (NA) tune for 93 octane gasoline or lower (non-OEM) |
| 1.5 | Naturally aspirated (NA) tune for greater than 93 octane gasoline or greater than 15% ethanol content |
| 2 | Forced induction (FI) tune for greater than 93 octane gasoline or greater than 15% ethanol content |

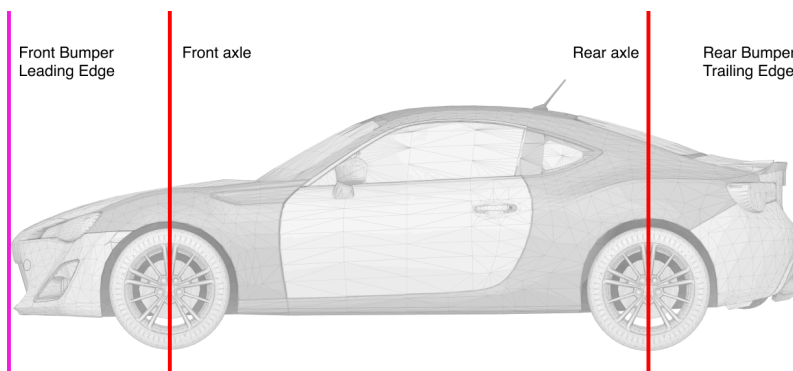


Figure 1: Leading and trailing edges are measured as a straight line to the ground

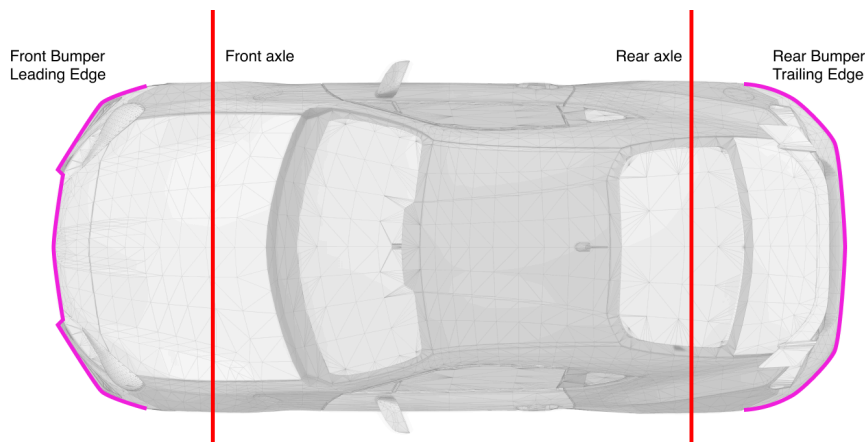


Figure 2: Leading and trailing edges follow the contour of the vehicle

Aero: Splitters/Lips

Take points for ONE of the following:

| Points | Modifications |
|--------|---|
| 0 | No aero modifications or any device extending less than 50 mm in any direction from the leading edge of the bumper (including STI lip and TRD lip) |
| 1 | Any device extending 50-74 mm in any direction from the leading edge of the bumper |
| 1.5 | Any device extending 75-124 mm in any direction from the leading edge of the bumper |
| 3 | Any device extending greater than 125 mm in any direction from the leading edge of the bumper |

Aero: Wings/Spoilers

Take points for ONE of the following:

| Points | Modifications |
|--------|---|
| 0 | No aero modifications, OEM rear spoiler, OEM wing (except Gen. 1 BRZ tS wing), or any aftermarket spoiler less than 60 mm in height |
| 0.5 | Aftermarket rear spoiler greater than 60 mm in height |
| 1 | Gen. 1 BRZ tS wing, SARD LSR, or any wing with maximum width of 1400 mm, maximum stand height of 200 mm, maximum chord length of 200 mm, and no added gurney flap |
| 1.5 | APR GTC-200, Voltex Type 12, Voltex Type 1S, or any wing with maximum width of 1460 mm, maximum stand height of 245 mm, and maximum chord length of 250 mm |
| 2 | Any wing wider than 1460 mm, higher than 245 mm, or with a chord length greater than 250 mm |

Aero: Other

Free Modifications

- Rear diffuser between the rear axle and the trailing edge of the bumper
- Side skirts
- Rear spats

Take points for EACH applicable row:

| Points | Modifications |
|--------|---|
| 0.5 | Canards, dive planes, hood vents, fender vents, and/or vertical deviations on splitters |
| 0.5 | Any underbody aero modifications between the front and rear axle and/or rear diffuser extending backward beyond the rear bumper trailing edge |

Suspension

Free Modifications

- Any spherical bushings, including strut top mounts
- Any alignment bolt/kit
- Any altered suspension mounting points and suspension lengths
- Any bolt-on chassis bracing
- Any sway bars
- OEM-style, non-adjustable dampers with fixed spring perches and unaltered valving

Take points for EACH applicable row:

| Points | Modifications |
|--------|---|
| 0.5 | Non-OEM springs |
| 0.5 | Adjustable dampers (valving or ride height) or modification to off-the-shelf damper valving |
| 0.5 | Shock volume-expanding devices (e.g. remote reservoirs or piggybacks) |

Weight Reduction

Free Modifications

- Any lightweight battery

Take points for EACH applicable row:

| Points | Modifications |
|--------|---|
| 1 | Removal of any interior trim pieces or seating not required for installation of a roll cage |

Safety

Free Modifications

- Any in-cabin safety equipment
- Aftermarket brake calipers, rotors, pads, or brake ducting