



2024 Rules

Revision 1.0 released Dec 22, 2023 *2024 Changes in red*

Revision 1.1 released Aug 06, 2024 *Changes in green*

1. Introduction

- 1.1. Drivers of all skill levels are welcome.
- 1.2. Participants in GT Radial Tire contingency *and Championship Cash Prize* are required to display *1 GT Radial decal on the windshield and display 1 GT Radial decal on each side of the car.*
- 1.3. Chassis must be a 2012-2016 Scion FRS, 2017-2020 Toyota 86, 2022+ Toyota GR86, or 2012-current Subaru BRZ.
- 1.4. Cars will be classed according to rules and modification points listed in the following sections.
- 1.5. A car may be used in multiple classes if driven by different drivers. Please comment on your event registration form if you are co-driving a car and what group you are driving in.
- 1.6. A driver shall not compete in more than one class during an event.
- 1.7. If a driver modifies their car mid-season and moves up or down a class, 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 participating in the GT Radial Championship Prize challenge cannot change classes.
- 1.8. Prior to a driver's first event of the season, they may declare to run in a higher class than their modification points would normally dictate.
- 1.9. The following timing methods are accepted, *but transponder time will take priority if more than one time is available for a given lap:*
 - 1.9.1. Official track transponder timing.
 - 1.9.2. AiM Solo or other data logger with 10Hz *or greater* GPS with *0.2s* penalty.
 - 1.9.3. Other data logger with 1Hz GPS with *0.5s* penalty.
- 1.10. 2013-2020 model year Scion FRS, Subaru BRZ, Toyota GT86, shall be referred to as Gen. 1.
- 1.11. 2022+ model years Toyota GR86, Subaru BRZ, shall be referred to as Gen. 2.
- 1.12. All in-season rule changes will be announced 60 days ahead of enforcement.
- 1.13. Questions, corrections, or clarifications can be asked on Facebook group page or sent to 86drivechallenge@gmail.com

2. GT Radial Stock Class

This class is designed to keep costs to a minimum and be attractive to drivers with nearly stock vehicles. Eligible for cash prizes from sponsor GT Radial.

- 2.1. Vehicles in this class are only allowed performance modifications included in this section.
- 2.2. Gen. 2 lap times will be balanced to Gen. 1 lap times in this class using a time handicap added to their lap time. Tracks/configurations not listed, will use the closest comparable track configuration.

2.2.1.

Track	Handicap Time
Thunderhill West	+0:01.500
Thunderhill East	+0:02.500
Thunderhill 5-mile Bypass	+0:04.000
Sonoma Raceway	+0:02.500
Laguna Seca	+0:02.500
Buttonwillow Raceway #13CW	+0:02.000

2.3. Engine

- 2.3.1. Engine software must be OEM.
- 2.3.2. Oil coolers, **accumulators, and/or sump changes** may be used.
- 2.3.3. Gen. 2 intake charcoal filters shall be present and unaltered.

2.4. Alignment:

- 2.4.1. Front camber shall not exceed -2.5 degrees.
- 2.4.2. Front camber may be adjusted using only:
 - 2.4.2.1. Toyota SU003-02818 or Subaru 901000394.
 - 2.4.2.2. SPC 81280, SPC 81305, Whiteline KCA416, Whiteline KCA414, or Eibach 5.81305K.
 - 2.4.2.3. Pedders PED-580096 or Whiteline KCA335 Front Strut Mounts.
 - 2.4.2.4. Camber plates.
- 2.4.3. Toe angle may be adjusted.
- 2.4.4. Cutting or bending of any vehicle sheet metal or suspension components to change alignment or ride height is not allowed.
- 2.4.5. **Front Wheel spacers are allowed.**

2.5. Wheels must be:

- 2.5.1. Width of 8.0 inches maximum.

2.6. Tires must be:

- 2.6.1. 17in GT Radial Champiro SX2 or HPY with section width of **215 or 225**.
- 2.6.2. Michelin Primacy HP in size 215/45-17(will not be eligible for the cash prize program for the season, nor tire contingency while competing with these tires).
- 2.6.3. A participant with a Gen. 2 car with OEM Michelin Pilot Sport 4 tires will be allowed to run their

OEM tires for the first two events they compete in, and must switch to approved tires afterwards (will not be eligible for the cash prize program for the season, tire contingency, nor 86 Challenge track records while competing with these tires).

- 2.7. Any safety device or braking upgrade may be used.
- 2.8. Replacing OEM ~~Gen. 4~~ parts with newer/older **OEM Gen. 4** parts is allowed (e.g. dampers, sway bars, etc).
- 2.9. No lightweight replacement parts are allowed (e.g. battery, **lighter than OEM GF** trunk) or removal of parts allowed. Removal of spare tire, floor mats, and tools is allowed.
- 2.10. Cars equipped with a full aftermarket safety system (bucket seats, racing harnesses, neck restraint system, full or half roll cage, etc.) are allowed to participate in Stock Class as long as total curb weight of the car with full tank of fuel remains above 2780 lb (driver not included). The car will need to be weighed at a location approved by the rules board before they are allowed to enter Stock Class.
- 2.11. STI lip and TRD lip are not allowed.
- 2.12. OEM (or equivalent sized) 2022+ ducktail allowed.
- 2.13. BRZ tS wing not allowed.
- 2.14. OEM-style, **off-the-shelf**, non-adjustable and non-rebuildable dampers are acceptable alternatives to OEM dampers.
- 2.15. **Non-OEM cat-back (no removal of any catalyst) exhaust with a weight greater than 32 lbs allowed.**

3. GT Radial Street Class

This class is to keep costs low for drivers with minimally modified Gen. 2 vehicles and moderately modified Gen. 1 vehicles. Eligible for a cash prize.

- 3.1. Maximum 3 modification points.
- ~~3.2. Any performance modification not listed on the mod/points list is prohibited, without prior board approval.~~
- 3.3. 2850 lbs minimum weight with driver and FULL tank of gas.
- 3.4. Wheels must be:
 - 3.4.1. Maximum wheel width 9 inches.
- 3.5. Tires must be:
 - 3.5.1. **17 inch** GT Radial Champiro SX2 or HPY **245 or less section width.**
 - 3.5.2. Michelin Primacy HP in size 215/45-17 (will not be eligible for the cash prize program for the season, nor tire contingency while competing with these tires).
 - 3.5.3. **A participant with a Gen. 2 car with OEM Michelin Pilot Sport 4 tires will be allowed to run their OEM tires for the first two events they compete in, and must switch to approved tires afterwards (will not be eligible for the cash prize program for the season, tire contingency, nor 86 Challenge track records while competing with these tires).**

4. Touring class

This class allows for much more modification freedom and time is adjusted based on build points. **Final time is equal to actual time + handicap time.**

- 4.1. Maximum 10 modification points.
- 4.2. Maximum tire width: 255.
- 4.3. 2750 lbs minimum weight with driver and full tank of gas.
- 4.4. Event standings will be determined by adjusted track time.
Adjusted track times = the measured time + build points * adjustment factor.
Adjustment factor = (Gen. 1 Stock record at event track) / (Gen. 1 Stock record at Thunderhill East Bypass).

- 4.5. **Touring handicap table (Top row is Build Points, use track to find handicapped time to be added to lap time):**

Track	Correction Factor	-1.0	-0.5	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	7.5	8.0	8.5	9.0	9.5	10.0
TH West	0.691	-0.7	-0.3	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	5.2	5.5	5.9	6.2	6.6	6.9
TH East	1.000	-1.0	-0.5	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	7.5	8.0	8.5	9.0	9.5	10.0
TH 5mile	1.648	-1.6	-0.8	0.0	0.8	1.6	2.5	3.3	4.1	4.9	5.8	6.6	7.4	8.2	9.1	9.9	10.7	11.5	12.4	13.2	14.0	14.8	15.7	16.5
Sonoma	0.922	-0.9	-0.5	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	6.5	6.9	7.4	7.8	8.3	8.8	9.2
Buttonwillow	0.973	-1.0	-0.5	0.0	0.5	1.0	1.5	1.9	2.4	2.9	3.4	3.9	4.4	4.9	5.4	5.8	6.3	6.8	7.3	7.8	8.3	8.8	9.2	9.7
Laguna	0.829	-0.8	-0.4	0.0	0.4	0.8	1.2	1.7	2.1	2.5	2.9	3.3	3.7	4.1	4.6	5.0	5.4	5.8	6.2	6.6	7.0	7.5	7.9	8.3

5. Unlimited Class

This class allows unconstrained builds to achieve the ultimate 86 lap times. For people who don't like conforming to rules!

- 5.1. Anything goes!

6. Modification Points

Points	Modification
Chassis	
0	Gen. 1 (2013-2020 model year)
2	Gen. 2 (2022+ model year)
Tires (Any tire not on this list will automatically be 6pts, without prior rules board approval)	
-1	17 inch GT Radial SX2 / GT Radial HPY / Michelin Primacy HP
0	215/40-18 Michelin Pilot Sport 4 (OEM only)

1	18 inch GT Radial SX2, GT Radial SX2 RS
2	V730, RS-4, ZIII / ZIIISS, RT615K, 595 RSRR, CUP2 (180TW), NS2R, SUR4, AD08R, NT01 / NT05, R888, Supercar 3, CUP2 Connect, VR-1 S1, MPS4S
3	Super tires: CR-1, AR-1, A052, RC-1, VR-1 S2, RE71R, RE71RS, Rival S, SUR4G, RT660, Supercar 3R
5	Treadwear 40-99
6	Racing slicks
Engine and Drivetrain	
0.5	Gen. 1 Aftermarket intake, header, front-pipe, overpipe, and/or any removal of OEM catalytic converter
0.5	Gen. 1 NA tune for less than or equal to 93 (R+M)/2 octane rating (non-OEM)
1.5	Gen. 1 NA tune for greater than 15% ethanol content or gasoline greater than 93 (R+M)/2 octane rating
0.5	Gen. 2 Aftermarket intake, header, front-pipe, overpipe, and/or any removal of OEM catalytic converter
1	Gen. 2 NA tune for less than or equal to 93 (R+M)/2 octane rating (non-OEM)
1.5	Gen. 2 NA tune for greater than 15% ethanol >E15 or gasoline greater than >93 (R+M)/2 octane rating
5	Forced induction and tune for less than or equal to <93 (R+M)/2 octane rating
2	Forced induction tuned for greater than 15% ethanol content >E15 or gasoline greater than >93 (R+M)/2 octane rating
0.5	Lighter than OEM rotational inertia flywheel, clutch and/or driveshaft
0.5	Non-OEM limited slip differential
X	Other engine swap (contact rules board for individual engine swap classing)
1	Transmission (non-OEM)
Rear Aero	
Since aerodynamic mods can be varied in form/function, they may warrant individual assessment by the rules board	

0	Really Small Rear Aero - OEM rear spoilers, OEM wings (excluding tS wing), and aftermarket spoilers, wings and gurney flaps less than 50mm 60mm in height
0.5	Small Rear Aero - Aftermarket and OEM rear spoilers more than 50mm 60mm in height
1	Medium Rear Aero - BRZ tS, SARD LSR, or any wing with max width of 1400mm, max stand height of 200mm, max chord length of 200mm, and no added gurney flap
1.5	Large Rear Aero - APR GTC-200, Voltex Type 12, Voltex Type 1S. Any wing with max width of 1460mm, max stand height of 245mm, and max chord length of 250mm
2	Unlimited Rear Aero - Wings with width greater than 1460mm, stand height greater than 245mm, or chord length greater than 250mm
0.5	Rear Diffuser that extends beyond in front of the rear axle or behind the rear bumper
Front Aero	
Since aerodynamic mods can be varied in form/function, they may warrant individual assessment by the rules board	
0	Small Front Aero - STI lip, TRD lip, or any device that extends less than 50mm outward or rearwards from the bottom leading edge of the bumper
1	Medium Front Aero - any device that extends 50 to 74mm outward or rearwards from the bottom leading edge of the bumper
1.5	Large Front Aero - any device that extends 75 to 124mm outward or rearwards from the bottom leading edge of the bumper
3	Unlimited Front Aero - any device that extends greater than 125mm outward, and any distance rearward from the bottom leading edge of the bumper
0.5	Canards/dive planes, hood vents, fender vents or any vertical deviation on splitter
Suspension	
0	OEM-style, off-the-shelf , non-adjustable, non-rebuildable dampers with off the shelf valving and with OEM equivalent springs
1	Adjustable dampers, non-adjustable rebuildable dampers or stiffer than OEM springs
Weight Reduction	
1	Removal of any interior trim pieces or seating not required for installation of a roll cage
Free modifications	
0	Any in-cabin safety equipment Any replacement drop-in air filter for OEM intake

	Aftermarket radiator or oil-cooler Aftermarket calipers, rotors, pads or brake ducting Any interior removal as needed to accommodate safety equipment Any alignment bolt/kit, bump steer kit, tie rod end, roll center adjuster Any spherical bushings including strut top mounts Any bolt-on chassis bracing Any oil-catch can, oil baffle pan Any lightweight battery Any cat-back (no removal of any catalyst) exhaust
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7. Championship Scoring

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

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

- 7.2. 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.
- 7.3. Ties will go to the competitor with the lowest time at **the same configuration** Thunderhill East regular event during the season. If there is still a tie, the participant with the fastest time at Laguna Seca regular event during the season will be awarded the win.