

17th PN Racing World Cup

PNWC 2023

Rules and Regulations **Version 23.10** 230831

Highlights:

Added Rad Body Mako X and Catfish body to 2WD Mod and AWD Mod class
 Added Rad Body Skillet pan body to Pan Open class
 Added SBRC-B016 JX Lexan Body to 2WD Mod and AWD Mod class
 Added Formula 1 Class
 Added MWX R.1 chassis to GTLM Super Stock and 2WD Mod class
 Added G-Force Lightning chassis to GTLM Super Stock and 2WD Mod class
 Gyro and Receiver build in Gyro is not allowed in all classes
 New MR2714WC Pinion for GTLM Super Stock class
 New 416416WC Blue Pinion for 2WD Stock Class
 A Main max 10 drivers only
 GTLM Super Stock Class ESC changed to open ESC any mode
 2WD Stock Spec Pinion added MR2710WC (Blue)

Race Classes

Kysoho Box Stock, 2WD Stock, GT Super Stock, 2WD Modified, AWD Modified and Pan Car Open.
 Each driver maximum 3 classes.

PNWC Final Race Format

Qualifying

- There will be Seeding Round plus THREE qualifying runs for each class.
- Each round will last 5 minutes.
- For the Seeding Round, the starting grid will be staggered in a random order.
- For the Q1, the starting grid will be based on Seeding Round Top 5 average laps.
- For the Q2 and Q3, racers will be re-shuffled each round into heats based best lap time results.
- The starting order for each run will be based on the number of laps run in the time allowed.
- Top Qualifier (TQ) will be awarded to the racer with the highest lap count for a single heat.

Mains

- All classes: Three Mains 8 minutes for A Main, Two Mains 5 minutes for Others Main. No bump up.
- A main will be 10 drivers.
- All mains will be 10 drivers, the lowest main maximum 12 drivers.

- A driver who wins the first two mains of a triple A Main event must sit out the third main.
- Best two rounds point highest is final winner.
- 1st place each round will score: 100 points.
2nd place will score: 98 points
3rd place will score: 97 points
4th place will score: 96 points
5th place will score: 95 points
6th place will score: 94 points
7th place will score: 93 points
8th place will score: 92 points
9th place will score: 91 points
10th place will score: 90 points
11th place will score: 89 points
12th place will score: 88 points
- The first tie breaker being the total of the laps and time of two highest mains. Subsequent ties are broken by the single best laps time of either highest pointed main.

Novice Box Stock Class

Driver Restriction: 2005-2022 PNWC Final any classes A Main drivers, **NOT** allowed in this class. If you sign up for Novice Box Stock, you only allowed additional class for 2WD Stock.

Motor:

Kyosho MZ9P and MZ9E Motor from RTR, allow change the motor wire and remove the safety switch.

Chassis:

Kyohso MR03S, MR03S2 and MR03 RWD.

Wheels:

Kyosho or PN plastic wheels, Front 8.5mm x 20mm, Rear 11mmx20mm, offset must fit inside of the body.

Tire:

Kyosho or PN rubber tire only

Traction Compounds **NOT** allowed on tire or on race surface. Tire warmers are allowed. Tires may be cleaned with a 70% alcohol solution. If a driver uses tire cleaner that has been deemed illegal, the driver will be subject to any penalties that apply. Please address any questions concerning tire cleaners at the drivers meeting.

Electronic & Transmitter:

Kyohso original from RTR, NO any modification.

Gyro and Receiver build in Gyro is not allowed.

Gear Ratio:

Fixed 9T Pinion with Stock Gear Diff. Pinion - Kyosho or PN 400329 MR2709 only.

Wheelbase:

90mm to 102mm

Body:

Kyosho original AutoScale body, white body, Jomurema GT01 body and TRP Scale body, all parts must be original from that body, limited wheel clearance modification allowed.

Batteries:

Kyosho Speed House 800HV, Peak Racing 900HV, TRP747, TRP900, PN HP750, PN HP900 and Silver Horse 800, AAA NiMH 4pcs only.

Option Parts:

Kyosho or PN Ball Bearing, wheel nut and T-Plate only.

Modifications:

It must be run in stock configuration.

In PNWC Final Race will not have this class, only for regional race.

2WD Stock Class

Driver Restriction: 2005-2022 PNWC Final any classes A Main top 3 position drivers, **NOT** allowed in this class.

Chassis:

Kyosho Mini-Z Racer MR01, MR015, MR02, MR03, MRC MR01 and PNR2.5W.

90mm-98mm wheel base only.

Body:

Kyosho Mini-Z, TRP Scale and Jomurema GT01, GL 488 Lambo, Silver Horse R8 body only, LeMans body **NOT** allowed, full windshield and window must be installed, except for clearance, Lexan window and Lexan Roof allowed.

Motor:

Handout motor PN Brushless Sensorless 3500kv #170035WC, all motor comes with standard 14.5 rotor, and all motor will inspect by motor checker machine, make sure all motor running on same performance, and all motor will be sealed with security label, if the label removed or broken will be VOID.

The motor will be provided on the first practice day entry fee included one, and each class allows to purchase an extra one motor.

Fixed Gear ratio 64 Pitch 16 Pinion (#416416WC Blue, #426416, #MR2716WC Blue) / 53T Spur Gear (#MR2953WC Yellow or #MR2055-T53WC Yellow) ONLY.

ESC:

Kyosho ASF VE VE Pro MR03S RWD and EVO, PN 16A ESC (#500807 and #500807A).

Gyro and Receiver build in Gyro is not allowed.

Battery:

Cars must be powered by four AAA batteries. Alkaline, Ni-MH or Ni-Cd batteries may be used. No other type of battery may be used. For example: Lithium Polymer may not be used. Additional battery for transponder allowed.

Option Parts:

Any aftermarket brand Mini-Z production parts allowed, any homemade parts, 3D print option parts and prototype parts not allowed.

Allowed 3D Print Transponder Holder, Body Side Clips, ESC Top Cover allowed.

Wheel:

All brand Plastic and Aluminum Mini-Z production wheel rims are allowed. Maximum front wheel width is 8.5mm. Maximum rear wheel width is 11mm. Maximum wheel diameter is 20mm. All wheel rims must be original design made for Mini-Z RACER, any modification is not allowed, any slot-car design wheel and 3D print wheel not allowed.

Tire:

Any Brand of Rubber Mini-Z production tire ONLY. Homemade tires, Foam tires, Silicon tires, Urethane tires, Ethyl Carbamate tires **NOT** allowed. No tire insert use. Traction compounds **NOT** allowed on tire or on race surface. Tire warmers are allowed. Tires may be cleaned with a 70% alcohol solution. If a driver uses tire cleaner that has been deemed illegal, the driver will be subject to any penalties that apply. Please address any questions concerning tire cleaners at the drivers meeting.

Minimum Weight:

Whole car with everything 160g.

Formula 1 Class

Chassis:

PNR 3.0F1, GL Racing GLF and G-Force Formula.

Body:

PN F1 Body #600850, GL F1 Body #GLF-S-001 and G-Force Formula Body.

Front bumper ball bearing NOT allowed.

Motor:

Handout motor PN Brushless Sensored Anima 2500kv #170025WC, all motor comes with standard 14.5 rotor, and all motor will inspect by motor checker machine, make sure all motor running on same performance, and all motor will be sealed with security label, if the label removed or broken will be VOID.

The motor will be provided on the first practice day entry fee included one, and each class allows to purchase an extra one motor.

Fixed Gear ratio 64 Pitch 12 Pinion (#416412 or #426412) / 53T Spur Gear (#MR2953WC Yellow or #MR2055-T53WC Yellow) ONLY.

ESC:

OPEN any Sensored or Sensorless ESC.

Gyro and Receiver build in Gyro is not allowed.

Battery:

2S Li-Po battery, maximum 8.45V.

Additional battery for transponder allowed.

Option Parts:

Allowed any aftermarket brand production parts for PNR 3.0F1 or GLF.

Allowed Z-Performance front bumper (not installed ball bearing) and rear wing.

NOT Allowed any homemade parts, 3D print option parts and prototype parts.

Wheel:

PN Racing MR2088 Machine Cut Delrin Black Formula Wheel ONLY.

Front Wheel:

#MR2088R0 Mini-Z 2WD Machine Cut Delrin Black Formula 11x20mm Flanged Wheel.

#MR2088R0-19 Mini-Z 2WD Machine Cut Delrin Black Formula 11x19mm Flanged Wheel.

Rear Wheel:

#MR2088R14 Mini-Z 2WD Machine Cut Delrin Black Formula 14x20mm Flanged Wheel R14.

#MR2088R14-19 Mini-Z 2WD Machine Cut Delrin Black Formula 14x19mm Flanged Wheel R14.

Tire:

Any Brand of Rubber Mini-Z production tire ONLY. Homemade tires, Foam tires, Silicon tires, Urethane tires, Ethyl Carbamate tires **NOT** allowed. No tire insert use. Traction compounds **NOT** allowed on tire or on race surface. Tire warmers are allowed. Tires may be cleaned with a 70% alcohol solution. If a driver uses tire cleaner that has been deemed illegal, the driver will be subject to

any penalties that apply. Please address any questions concerning tire cleaners at the drivers meeting.

Minimum Weight:

Whole car with everything 140g

GTLM Super Stock Class

Chassis:

Kyosho Mini-Z Racer MR01, MR015, MR02, MR03, Jomurema, GL Racing GLR, GLR-GT GL-GTR, MRC MR01, PNR2.5W, PNR3.0, RTRC RTA, Atomic MRZ MRZ Pro, NEXX Specter, Reflex RX28, G-Force Lightning and MWX R.1

GT Body 90mm-98mm wheel base only.

LM Body 102mm wheel base only.

Body:

Kyosho Mini-Z, TRP Scale and Jomurema GT01, GL 488 Lambo R8 911, Silver Horse Audi-R8 Sauber body only, full windshield and window must be installed, except for clearance, Lexan window and Lexan Roof allowed.

Motor:

Handout motor PN Brushless Sensored Anima 2500kv #170025WC, all motor comes with standard 14.5 rotor, and all motor will inspect by motor checker machine, make sure all motor running on same performance, and all motor will be sealed with security label, if the label removed or broken will be VOID.

The motor will be provided on the first practice day entry fee included one, and each class allows to purchase an extra one motor.

Fixed Gear ratio 64 Pitch 14 Pinion (#416414 or #426414 or MR2714WC Brown) / 53T Spur Gear (#MR2953WC Yellow or #MR2055-T53WC Yellow) ONLY.

ESC:

OPEN any Sensored or Sensorless ESC.

Gyro and Receiver build in Gyro is not allowed.

Battery:

2S Li-Po battery, maximum 8.45V.

Additional battery for transponder allowed.

Option Parts:

Any aftermarket brand Mini-Z production parts allowed, any homemade parts, 3D print option parts and prototype parts not allowed.

Allowed 3D Print Transponder Holder, Body Side Clips, ESC Top Cover allowed.

Wheel:

All brand Plastic and Aluminum Mini-Z production wheel rims are allowed. Maximum front wheel width is 8.5mm. Maximum rear wheel width is 11mm. Maximum wheel diameter is 20mm. All wheel rims must be original design made for Mini-Z RACER, any modification is not allowed, any slot-car design wheel and 3D print wheel not allowed.

Tire:

Any Brand of Rubber Mini-Z production tire ONLY. Homemade tires, Foam tires, Silicon tires, Urethane tires, Ethyl Carbamate tires **NOT** allowed. No tire insert use. Traction compounds **NOT** allowed on tire or on race surface. Tire warmers are allowed. Tires may be cleaned with a 70% alcohol solution. If a driver uses tire cleaner that has been deemed illegal, the driver will be subject to any penalties that apply. Please address any questions concerning tire cleaners at the drivers meeting.

Minimum Weight:

Whole car with everything 160g.

2WD Modified Class**Chassis:**

Kyosho Mini-Z Racer MR01, MR015, MR02, MR03, Jomurema, GL Racing GLR GLR-GT GL-GTR, MRC MR01, PNR2.5W, PNR3.0, RTRC RTA, Atomic MRZ MRT MRZ Pro, NEXX Specter, Reflex RX28, G-Force Lightning and MWX R.1

94mm-98mm Wheel Base ONLY, No weight limit.

(Aftermarket chassis TBA, contact philip@pnracing.com to submit your chassis homologation)

Approved Lexan Body:

PN - Supra A90, JGT1, JSK, AD4, GT4LB, 992GT3, M4GT3, Concept C9, V2 JGT01, ZLB

SBRC - Zenvo ST1, Phenom GT, NSX GT3, 458, SBX, STR, HYR, XBOW2, JX

Marka - RK-410, RK-408, RK-S, RK-PZR, RK-P-One, RK-W, RK-12, RK-TWR, RK-BLD, RK-NTI, RK-HC, RK-MK4, RK-SP6

Atomic - M4Z, DBX, HYP, VST

GL Racing - P1M

Protoform - P63

Rad Body – Mako, Mako X and Catfish

Maximum wing 50mm from the ground.

#600630 PN Carbon Wing and #600640 Lexan Wing allowed.

(Aftermarket bodies is TBA, contact philip@pnracing.com to submit your bodies sponsor)

Motor:

Open any Mini-Z size motor 130 Brushed or 1626 Brushless, Sensored or Sensorless.

ESC:

Open any ESC Sensored or Sensorless.
Gyro and Receiver build in Gyro is not allowed.

Battery:

2S Li-Po battery.
Additional battery for transponder allowed.

Option Parts:

Any aftermarket brand Mini-Z production parts allowed. Any homemade parts, 3D print option parts and prototype parts **NOT** allowed.
Allowed 3D Print Transponder Holder, Body Side Clips, ESC Top Cover allowed.

Wheel:

All brand Plastic and Aluminum rims are allowed. Maximum front wheel width is **11mm**. Maximum rear wheel width is **14mm**. Maximum wheel diameter is 21mm. All wheel rims must be original design made for Mini-Z RACER, any modification is not allowed, any slot-car design wheel and 3D print wheel **NOT** allowed.

Tire:

Any Brand of Rubber Mini-Z production tire ONLY. Homemade tires, Foam tires, Silicon tires, Urethane tires, Ethyl Carbamate tires **NOT** allowed. No tire insert use. Traction compounds **NOT** allowed on tire or on race surface. Tire warmers are allowed. Tires may be cleaned with a 70% alcohol solution. If a driver uses tire cleaner that has been deemed illegal, the driver will be subject to any penalties that apply. Please address any questions concerning tire cleaners at the drivers meeting.

Minimum Weight:

No minimum weight limit.

AWD Modified Class

Chassis:

Kyosho Mini-Z Racer AWD MA010, MA015, MA020 and MA030, Atomic BZ and SZ2, GL Racing GLA, GL GLA Giulia Chassis with 98mm/WB, Mini-Q Q7.

94mm-98mm Wheel Base ONLY, No weight limit.

(Aftermarket chassis TBA, contact philip@pnracing.com to submit your chassis homologation)

Approved Lexan Body:

PN - Supra A90, JGT1, JSK, AD4, GT4LB, 992GT3, M4GT3, Concept C9, V2 JGT01, ZLB.
SBRC - Zenvo ST1, Phenom GT, NSX GT3, 458, SBX, STR, HYR, XBOW2, JX.

Marka - RK-410, RK-408, RK-S, RK-PZR, RK-P-One, RK-W, RK-12, RK-TWR, RK-BLD, RK-NTI, RK-HC, RK-MK4, RK-SP6.

Atomic - M4Z, DBX, HYP, VST.

GL Racing - P1M.

Protoform - P63.

Rad Body – Mako, Mako X and Catfish.

Maximum wing 50mm from the ground.

PN #600630 Carbon Wing and #600640 Lexan Wing allowed.

(Aftermarket bodies is TBA, contact philip@pnracing.com to submit your bodies sponsor)

Motor:

Open any Mini-Z size motor 130 Brushed or 1626 Brushless, Sensored or Sensorless.

ESC:

Open any ESC Sensored or Sensorless.

Gyro and Receiver build in Gyro is not allowed.

Battery:

2S Li-Po battery.

Additional battery for transponder allowed.

Option Parts:

Open any parts allowed (including homemade parts, 3D print parts and prototype parts).

Wheel:

All brand Plastic and Aluminum rims are allowed. Maximum Front wheel width is **11mm**. Maximum Rear wheel width is **14mm**. Maximum wheel diameter is **20.5mm**.

All wheel rims must be original design made for Mini-Z RACER, any modification is not allowed, any slot-car design wheel and 3D print wheel not allowed.

Tire:

Any Brand of Rubber Mini-Z production tire ONLY. Homemade tires, Foam tires, Silicon tires, Urethane tires, Ethyl Carbamate tires **NOT** allowed. No tire insert use. Traction compounds **NOT** allowed on tire or on race surface. Tire warmers are allowed. Tires may be cleaned with a 70% alcohol solution. If a driver uses tire cleaner that has been deemed illegal, the driver will be subject to any penalties that apply. Please address any questions concerning tire cleaners at the drivers meeting.

Minimum Weight:

No minimum weight limit.

Pan Car Open Class

Chassis:

Open any RWD chassis ONLY, 94mm-98mm Wheel Base ONLY.

Body:

MUST be use the following bodies list, allow to cut the rear panel.

#600800 PN Racing Lexan Pan Car Body.

#600810 PN Racing BMR Lexan Pan Car Body.

#600810L PN Racing BMR Lexan Light Weight Version Pan Car Body.

#600819 PN Racing AMR Lexan Pan Car Body.

#600819L PN Racing AMR Lexan Light Weight Version Pan Car Body.

Marka RK-AMR.

Atomic MP1.

#SBRC-B011 SBRC Pan Body (Rear Wing must be not higher than the side panel).

#RAD006 Rad Body Skillet.

(Aftermarket Pan Car Body TBA, contact philip@pnracing.com to submit your chassis sponsor)

Motor:

Open any Mini-Z size motor 130 Brushed or 1626 Brushless, Sensored or Sensorless.

ESC:

Open any ESC Sensored or Sensorless.

Gyro and Receiver build in Gyro is not allowed.

Battery:

2S Li-Po battery.

Additional battery for transponder allowed.

Option Parts:

Open any parts allowed (including homemade parts, 3D print parts and prototype parts).

Wheel:

All brand Plastic and Aluminum rims are allowed. Maximum Front wheel width is **11mm**. Maximum Rear wheel width is **14mm**. Maximum wheel diameter is **20mm**.

All wheel rims must be original design made for Mini-Z RACER, any modification is not allowed, any slot-car design wheel and 3D print wheel not allowed.

Tire:

Any Brand of Rubber Mini-Z production tire ONLY. Homemade tires, Foam tires, Silicon tires, Urethane tires, Ethyl Carbamate tires **NOT** allowed. No tire insert use. Traction compounds **NOT** allowed on tire or on race surface. Tire warmers are allowed. Tires may be cleaned with a 70% alcohol solution. If a driver uses tire cleaner that has been deemed illegal, the driver will be subject to

any penalties that apply. Please address any questions concerning tire cleaners at the drivers meeting.

Minimum Weight:

No minimum weight limit.

GENERAL RULES

Each driver maximum 3 classes.

Body Modifications:

- Bodies may be functionally modified with minimal effect external appearance. The following non-comprehensive list of body modifications are allowed:
 - The rear bumper may be removed up to Maximum 20mm from the ground.
 - Wheel wells may be cut forward or backward to accommodate different wheelbase chassis.
 - Wheel wells may be cut or chamfered internally for tire clearance.
 - Lower portions of the body may be cut for ground clearance in front, sides or rear.
 - Body material may be shaved or thinned internally for weight reduction. Technical inspection officials reserve the right to disqualify any modified body deemed to be too fragile due to excessive material removal.
 - Body panels may be reinforced or strengthened internally without affecting external appearance.
 - Windshield and windows must be installed, but can be modified by cutting unexposed internal areas.
 - Original headlight covers must be installed, but headlight buckets may be removed or omitted. In the event that a headlight cover is lost, the hole may be covered with a decal.
 - Taillights and taillight covers may be removed or omitted.
 - Small body parts such as mirrors, canards, exhausts may be omitted or removed to prevent racing damage and debris on track.
 - All plastic bodies rear wing comes with the body may be installed according to the no height limited. Custom Manufactured wings allow using on the body, according to the height limited 45mm from the ground.
- The above list is non-comprehensive. The purpose and spirit of the rules is to allow functional performance modifications to the body while preserving the scale appearance and realism. The technical inspector has final authority in the judgment of body modification legality.
- If you have modified your body and have questions regarding the legality of the modifications, please submit the body in question to technical inspection PRIOR to racing qualification or main event round. This is in order to prevent any inadvertent disqualifications. The technical inspector will judge the legality of body modifications and photograph the body in its legal state if necessary.
- If the body is further modified post-inspection, the modifications may or may not be legal. For the racer's protection, please re-submit the body in question to technical inspection IMMEDIATELY if significant modifications are made.

- If the body is damaged, the condition of the body may or may not be legal. For the racer's protection, please submit the body in question to technical inspection IMMEDIATELY if significant damage occurs. If the damaged body is judged illegal, it must be repaired or replaced for the next qualification or main event round. Qualification or main event results during which racing damage occurs on track will be allowed, as long as the body is not judged to be intentionally designed to break away to benefit performance.

Weight, Width & Height Table:

	2WD Stock Class	Formula 1 Class	GTLM Super Stock Class		2WD Mod AWD Mod and Pan Car Open
Min. Weight	160g	140g	160g		No Limit
Max. Wheel Base	*98mm	*114mm	GT Body *98mm	LM Body Must be 102mm	94mm to 98mm
Max. Car Length	*180mm	Original body length	*180mm	*180mm	Subject with Bodies Rule 2WD and AWD Mod Max. Wing Height 50mm
Max. Car Width	* 80mm	Original body width	* 80mm	* 80mm	
Max. Wing Height	* 45mm	Original body height	* 45mm	* 45mm	

*Original body if no any modify, not apply for this rule.

- All Classes
Drivers may make minor modifications to the body and or chassis to reduce weight. Total vehicle weight must fall within the guidelines of this document. Please refer to the table above for weight requirements. The PN Racing directory and race officials reserve the right to disqualify a body and or chassis for excessive material removal if the body and or chassis is deemed to be fragile.

Sportsmanship:

Proper manners and good sportsmanship are expected from all drivers at all times. It is important to understand that general bad behavior like cursing, intentional bad driving, etc. will not be accepted and can result in a driver being penalized, disqualified or even asked to leave in extreme cases.

All participants will be expected to attend the drivers' meeting. All rules are available online at www.pnracing.com Drivers will be expected to understand and comply with each rule by the time they leave the driver's meeting. Ask any questions at this time.

If there is a rules dispute between drivers it must be brought to the attention of the race director or PN Racing personnel. The officials at the track will do their best to resolve any issue to the satisfaction of everyone.

If a racer notices an illegal item on another racer's car. Please report to PN Racing official after that racer's race, so the car can be inspected without interference.

Substitute drivers are not allowed in any qualification or main event race. An immediate disqualification from the event for both drivers will result.

Jumped starts:

A jumped start is any movement of a vehicle between the time the Starter announces the start time and the starting signal.

Penalties:

If one or more vehicles jump start, a false start will be declared, and the grid will be re-formed. If the same vehicle moves first time, it will be moved back the length of the grid from its original starting position, same car second time will be disqualifying the round.

If a jumped start is not called by the officials immediately at the start of a race but can be verified afterwards by at least two race officials using any recording device, a ten second penalty will be added to that offenders' particular qualifying time or if a main event, a one lap penalty will be assessed.

Timing System:

If the lap timing system error, that race will be re-schedule race again end of the round.

If transponder not count due to the race, it is driver responsibility, there will be no adjustments after the race.

Technical Inspections:

All racers are encouraged to bring their cars to the officials during open practice so that any corrections can be made before the official inspection.

- **Before each race**

Technical inspections will take place before each race. Inspections will be performed by PN Racing officials. If the PN Racing official determines that the car does not meet the requirements specified in this document the car will be deemed illegal and will not be allowed to race. It will be the responsibility of the driver to ensure that the car meets all requirements and passes inspection before the race begins. In the event that the PN Racing official does not catch a violation, the car will still be considered illegal and the racer will be subject to any consequences of running an illegal car.

- **After each race**

Cars and radios from each race must be put on the post-race tech table for any post-race inspection that is required. Drivers that did not finish their race are still subject to this rule. Inspection of cars will start only after the start of the preceding race (for example, inspection for race 2 will start after race 1 has started and is underway). Cars on the post-race tech table will not be released until the end of the following race (for example, cars that ran in race 2 will be released when race 3 is completed).

Final approval to approve the legality of any car is not valid until after the post-race inspection.

-END-