

ESROC

EUROPEAN SLOTRACING ORGANIZATION COMMITTEE

RULEBOOK 2001



1 ESROC

ESROC is a non-profit organization to promote slotracing in wingcar classes in Europe. The rules and regulations are made by the yearly ESROC meeting, taking place at the European Championships race. In the ESROC meeting, every country can have two representatives, so each country has two votes.

The entry fee for each individual EC race will be DM 50;- (in team race DM 100;-/ team) or equivalent in national currency. ESROC gets 30% of the entry fees of all European Championships races from the race organisers, to finance administration and other costs, accepted by the ESROC meeting.

1.1 JURY

In ESROC races, disputes are solved by a jury. The jury consists of one representative from each participating country, plus the chairman. In case of a tie, the chairman's vote will decide.

2 GENERAL RULES

2.1 GENERAL

All cars/racers are expected to comply with these guidelines.

All racers are responsible for the legality of their equipment.

Any rule that is in question or being interpreted improperly will be clarified by the ESROC chairman and/ or the jury.

The organizers have to provide prizes at least for the best 8 drivers in each class.

2.2 TRACK

For the European Championships, the racetrack has to be equipped with an automatic lapcounting system (computer). One monitor has always to be in front of the racers and viewable from the racers' position during the race.

The lanes have to be marked with colors and/ or numbers, the use of colors is preferred.

It is strongly recommended the lap counter be positioned after the banking. Every new track to be used in European Championships has to comply with this recommendation.



The plugs for controllers have to be marked with Parma colors only. Positive=White, Negative (Brake)=Red, Wiper=Black. Banana plug (Ø4mm) contacts are mandatory, additional contacts may be used to meet national standards.

The positive pole may be on either side of the slot, but its side has to be mentioned in the invitation.

In all ESROC events, qualifying and racing voltage for all classes will be limited to a maximum of 16.0 volts. If a power supply unit is used, 13,5 V is suggested for racing. Sufficient battery or power supply capacity is required. The voltages used in qualifying and race have to be mentioned in the invitation. This voltage is to be measured, unloaded without the cars on the track, using accurate digital voltmeters to record the values.

2.3 SMOKING

Smoking is prohibited within the room of the race-track and connected rooms.

2.4 ALCOHOL

Drivers, not able to control their car properly due to excessive consumption of alcoholic beverages, will be excluded from the race.

2.5 UNSPORTSMANLIKE CONDUCT

Unsportsmanlike conduct on the part of a driver or turn marshall will be subject to immediate disqualification at the discretion of the race director. Verbal abuse or profanity will not be tolerated. The race director may first warn drivers, marshalls or pit men if their behaviour is unacceptable. Serious or repeat violations will result in a 5 lap penalty for the first infraction and disqualification for the second. Repeat offenders of any unsportsmanlike conduct guidelines may be prohibited from future ESROC events.

2.6 PROTEST

A competitor may protest another racers equipment by officially informing the race director. Special provisions for armature protest are in the following section.

2.7 INTERNATIONAL RELATIONS

ESROC and NPRA of Brazil have decided on the following: The best European racer in ESROC European Championship Gp.7 race will receive a \$500 starting bonus at the NPRA Brazilian Championship (the same year), and the best Brazilian racer at the NPRA Brazilian Championship will receive a similar bonus when entering the ESROC race next year.



3 TECHNICAL SPECIFICATIONS

3.1 SCALE

The size of scale to which the cars must be built is 1/24th of the actual race car.

3.2 WIDTH

Maximum width of the car is 82.6 mm. Round head body mounting pins may extend beyond this width. Other type body pins such as glass head or "T"-type are not allowed.

3.3 WHEELS

All cars must have front and rear wheels (2 each) with rubber tires. Front wheel minimum diameter is 12.7 mm. Front wheels must rotate on their axles and be mounted so as to contact the racing surface, as the car is rocked to the side, before grounding on the chassis or body.

3.4 CLEARANCE

The minimum clearance for chassis, gear and motor is 0.8 mm. A driver, being caught with less than 0.8 mm on his car after his qualifying run will have his time disallowed and will be placed in the lowest race. Technical inspections can be made during the race (track call or lane change), and if a car has less than 0.8 mm at any time during the race, the car has to be corrected and checked by the technical inspector during race time before it can return to the track. No penalty is given for too low clearance. The technical inspector has to point out the area that is too low (motor dragging, bent chassis, etc.).

3.5 GUIDE FLAG

One guide or pickup device per car.

3.6 MOTOR SPECIFICATIONS

1. Gp.7

No restrictions.

2. Gp.27

A. Set up: No restrictions.

B. Armature: Must be tagged with at least the number "27" and mass produced by an USRA approved manufacturer. Must be commercially available. Must be wound with a



minimum of 38 series wound turns of AWG 27 wire per pole. AWG 27 wire, excluding insulation, is $\varnothing 0.358$ mm max. Armature stack lamination length shall be a minimum of 11.17 mm. (Using calipers with the faces across each end of the pole) and only the actual lamination material shall be used to determine this figure. This is meant to specifically exclude, as an example, such practices as the insertion of spacer type materials between the laminations, abnormally thick applications of coatings or any methods of artificial compliance with the rule. Any armature that has been purposely altered or tampered with, to make the stack appear longer, so as to attempt to comply with the length rules as listed, shall be declared illegal at the tech inspector's discretion.

3.7 BODY

Designs should resemble full size race cars. Manufacturers are urged to maintain scale proportions. Variations are allowed to conform to "state-of-the-art" practices.

A. Paint: All bodies must be fully painted and opaque from above when sitting on the tech block. The sides of the body may remain clear. Bodies should be detailed to resemble full size racecars.

B. Interior: All cars must contain a suitable painted, 1/24th scale, three-dimensional driver with helmet, shoulders, arms and steering wheel mounted in the original cockpit position at all times during the race. No paper drivers are permitted.

C. Windshields: Windshields must be clear.

D. Fender wells: Fender wells must be transparent; the front wheels must be visible when viewed from either side of the car.

E. Body openings: The chassis and guide flag must be completely covered by the body and air control when viewed from above, except for the body openings.

3.8 CHASSIS SPECIFICATIONS

No restrictions.

3.9 AIR CONTROL DEVICES

A. No part may exceed 63.5 mm in height, measured from the racing surface. All air control devices must be clear enough to read normal newspaper print through.

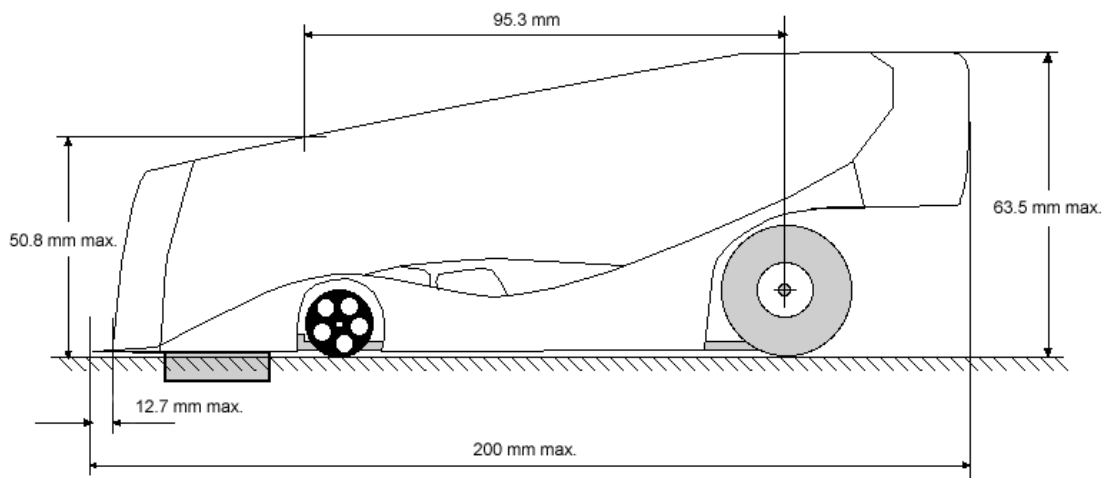
B. Side dams: May be a maximum of 63.5 mm in height aft of the rear wheel centreline and continue on a taper making them a maximum of 50.8 mm high at a point 95.3 mm forward of the rear wheel centreline. The same taper must continue ahead of the front wheels. The front edges must be taped and rounded in a manner suitable to avoid injury



to race participants and spectators. Side dams must be clear, although suitable decals and markings may be affixed.

C. Diaplane: Maximum length is 12.7 mm. Corners must be rounded.

D. Rear spoiler: Must be clear, although suitable decals may be affixed.



3.10 PARTS REPLACEMENT

Any component may be replaced during competition except the original chassis and body. Any racer found to have switched chassis or body will be disqualified immediately.

3.11 CONTROLLER SPECIFICATIONS

Any controller/choke may be used as long as the controller/choke uses no batteries or additional power sources to increase voltage or amperage at track braid. Controllers/chokes are subject to inspection by the ESROC chairman and/ or jury to verify compliance with the rules.

4 MISCELLANEOUS PROCEDURES

4.1 BLACK FLAG

The race director is obliged to black flag any car that is dragging, interfering with other cars or continuously de-slotting due to mechanical problems. Upon being black flagged, the driver must bring the car in for repairs immediately. If the problem is not corrected, the black flag may be enforced again as required.



4.2 TRACK CALLS

The power will only be turned off for extremely unfair or dangerous situations. The following are the only acceptable reasons:

1. Braid up
2. Power failure
3. Debris in slot
4. An unmarshable car
5. Deslotted car on the straight
6. Car in a wrong lane
7. Lap counter or track equipment failure
8. Too much glue

An illegal track call will result in a 2 lap penalty every time.

Cars in the pits during a normal track call can be worked on. If the race has to be stopped for a longer time because of track or lap counter failure, the race director calls "no work on cars", so there will be absolutely no work performed on cars on track or in the pits. Doing so will result in a 20 lap penalty. A second infraction will result in disqualification. This includes the pit helpers of the driver.

If a driver has serious problems (too much glue on the track), the driver has the right for a track call to remove glue from the lane. This will result in 10 lap penalty.

4.3 LAP COUNTER

The lap counter will be considered correct unless it can be proved otherwise. The counter should be corrected if necessary (as when a car crosses in the wrong lane). If a major error occurs in the counting process that cannot be corrected, the race director may:

1. Assign responsible stewards to count laps or verify the counter
2. Add or subtract mutually acceptable laps as established by race officials and drivers
3. Restart the segment
4. Restart the race from the latest possible point

Laps should not be added or subtracted unless the race director is certain the counter is incorrect. For a major error in counting, the steps taken should preserve as much of the race as possible, while remaining as fair as possible to all.

4.4 MARSHALLING

All drivers are expected to marshall the race preceding their own. Substitute marshalls must be acceptable to the race director and drivers. Good racing is not possible without good marshalls. Every racer is expected to do his part both before and after racing if nec-



essary. Failure to fulfill marshalling responsibilities will result in 10 lap penalty and/ or disqualification. All cars will be impounded after all races to ensure fair and proper marshalling responsibilities. Cars will be returned and move-up drivers will be given equal time to prepare for upcoming races.

4.5 LANE CHANGE

Following each lane change, all cars must be returned to the track where they stopped. Drivers have to use lane change cards with their name on it to mark their stopping position. The lane change card is always positioned on the driver's next lane. Putting a car back on the track in an advantageous position will result in a 5 laps penalty. A second infraction will result in disqualification. It is the driver's responsibility to know where the car stopped. When the car is removed from the track during racing, the same rule applies. Corner marshalls should notice the cars stopping in their section and pay close attention to cars near the lap counter section. At the conclusion of each race, cars will be left on the track until the order of finish is positively determined.

4.6 GLUE CONDITIONS

1. UNLIMITED GLUE

Glue may be applied to the track. Glue may be removed from the turns with a clean, dry, rag only. Care must be taken to avoid changing conditions on adjacent lanes. All glueing and cleaning of the track braid and straight must be completed before the power comes on. Nothing may be put down or removed during the racing. Doing so will result in a 10 lap penalty. See also chapter 4.2.8.

2. TRACK CLEANING

All braid and the track surface of all straight sections may be cleaned.

3. ACCIDENTAL SPILLAGE

If an accidental spillage occurs, the race director may respray the affected area to restore fair racing conditions. PLEASE NOTE: Most cleaning solutions are FLAMMABLE! Care must be taken during their use. Fire extinguishers should be located in the immediate area and other necessary precautions taken to ensure safety.

4.7 ARMATURE PROTEST

Any competitor may protest another's armature. The competitor must officially inform the race director, at which time the race will be stopped. The protester may "buy a look" by posting a DM 10;- fee. He is then entitled to look at the suspected armature in the car. If



not satisfied, he may formally protest which requires posting a fee equal to double the current manufacturers suggested retail price of their respective armature. The "buy a look " fee is transferable. At this time, the armature must then be nondestructively and indelibly marked (suggest unique Dremel marks on the shaft). Extreme care must be exercised to avoid damage to armature balance and delicate components such as ball bearings, motor brushes, etc. An impartial race steward must then be charged with the responsibility of observing and verifying the authenticity of the armature for post racing inspection. The race will then be restarted. Through disassembly and inspection must be conducted immediately upon completion of racing, and must be conducted in a manner assuring accurate technical verification. This can be accomplished by destroying any epoxy or similar binder with extreme heat (a common torch does this nicely) . Then dissecting the armature with a Dremel and carefully measuring the wire and counting the turns. The fees will be held by the race director until resolution of the matter, then promptly surrendered to the appropriate party. Likewise, any winnings and/or points will be held pending the outcome of the inspection. " Buy a look " proceeds go to the protested party if not applied to a FORMAL PROTEST.

5 SPRINT RACE PROCEDURE

5.1 REGISTRATION

All cars shall be inspected and impounded prior to qualifying.

- A.** No cars will be accepted after announced registration closing time.
- B.** The chassis should be engraved with the driver's entry number and the initials of the tech inspector. The body should be marked with a spot of non-removable paint.

5.2 DRIVERS' MEETING

It is suggested that a drivers' meeting be held prior to qualifying to discuss race and qualifying procedures, marshalling responsibilities, racer conduct, glue rules, track calls, etc. Drivers with specific questions should ask them at this time

5.3 QUALIFYING

1. ORDER:

Determined randomly, such as drawing from a hat.



2. FORMAT:

A. A two minute run is allowed to establish the fastest single timed lap. Back up times will be recorded to alleviate tie breakers.

B. The first qualifier will receive one extra minute to break in the qualifying lane (with a spare car, if necessary).

C. Byes: A racer may take a bye for any reason (may abort initial qualifying attempt and re-attempt during the bye round). Thirty seconds will be deducted from the racer's remaining time as a penalty for using a bye. Cars will be technically inspected prior to the bye round. Times made during the initial attempt and the bye round will count. Byes will be run (racers' remaining time less thirty seconds deduction) at the end of qualifying in the same order as the original round.

D. No shows: Any registered racer not present to qualify when called will be given an automatic bye. Any racer unavailable for the bye will stand by his/ her previous best, or if no times are recorded, will be placed in the lowest level of consolation races.

E. After first qualifying attempt cars go back to parc fermé. When all drivers have finished their first qualifying attempt cars can be collected. After 15 minutes, cars have to be back in parc fermé. A driver not handing back his car in time can not run his bye round. After bye run, cars go back to parc fermé, and can be collected after the end of qualifying.

5.4 RACE

From the qualifying, the four fastest racers qualify directly to the semifinals. Next 12 racers qualify to the quarterfinals. All other racers will be positioned in the heats. The number of heats is unlimited. If heats are needed, the drivers will be placed in the heats in the same manner as into quarters (snake system). If the number of entries is less than 37, all the drivers placed 5 or lower in qualifying will start from the quarterfinals, drivers will be placed in the quarters following the same allocation pattern as the places 5-12.

All cars that will start in the next stage (heats, quarterfinals, etc.) of the race, will be impounded in parc fermé before the start of the first race. The cars will be given to the drivers 5 minutes before the start of their race. The cars will be returned to the parc fermé after the end of the race. An equal and sufficient time (at least 30 minutes) will be given to all racers to repair their cars between the stages.

The drivers are required to marshall the race after their own. If the driver does not marshall the warm-up, a warning will be given. If the driver is not at marshalling position at the start of the race, a 10 lap penalty will result immediately. The penalty is deducted from the driver's result in the stage the infraction took place.

**FINAL**

1st Semifinal A
 1st Semifinal B
 2nd Semifinal A
 2nd Semifinal B
 3rd Semifinal A
 3rd Semifinal B
 1st of most laps in Semifinals
 2nd of most laps in Semifinals

A SEMIFINAL

1st Qualifier
 4th Qualifier
 2nd by laps in Quarterfinals
 3rd by laps in Quarterfinals
 6th by laps in Quarterfinals
 7th by laps in Quarterfinals
 10th by laps in Quarterfinals
 11th by laps in Quarterfinals

B SEMIFINAL

2nd Qualifier
 3rd Qualifier
 1st by laps in Quarterfinals
 4th by laps in Quarterfinals
 5th by laps in Quarterfinals
 8th by laps in Quarterfinals
 9th by laps in Quarterfinals
 12th by laps in Quarterfinals

Move-up from quarterfinals:

Only as many quarterfinals as necessary. Depending on the number of quarterfinals, the move-up is as follows:

2 quarterfinals: 4 best from both and 4 lucky losers (best by laps) move up. Winner of A quarter
 3 quarterfinals: 3 best from each and 3 lucky losers move up.
 4 quarterfinals: 2 best from each and 4 lucky losers move up.

When 4 quarterfinals, line-up is as follows (if less than 37 racers, replace move-ups from heats with next qualifiers):

A QUARTERFINAL	B QUARTERFINAL	C QUARTERFINAL	D QUARTERFINAL
5 th Qualifier	6 th Qualifier	7 th Qualifier	8 th Qualifier
12 th Qualifier	11 th Qualifier	10 th Qualifier	9 th Qualifier
4 st Heats	3 nd Heats	2 rd Heats	1 th Heats
5 th Heats	6 th Heats	7 th Heats	8 th Heats
12 th Heats	11 th Heats	10 th Heats	9 th Heats
13 th Heats	14 th Heats	15 th Heats	16 th Heats
20 th Heats	19 th Heats	18 th Heats	17 th Heats
21 st Heats	22 nd Heats	23 rd Heats	24 th Heats

NOTE: When less than 4 quarterfinals, the racers will be placed in the quarters from qualifying using the snake system in similar fashion (3 quarters: A-B-C-C-B-A-A-B-C... / 2 quarters: A-B-B-A-A-B...). **Winners of the heats always move up.** The number of the heats is unlimited, but always as few as possible. Replace 1st of heats, 2nd of heats, 3rd of heats, etc. with the heat winners, depending on the number of heats.

RACE ORDER: Races always start with the lowest group. Racers can always choose the lane they want to start on.

Order of running:

Heat D-C-B-A
 Quarter D-C-B-A
 Semi B-A
 Final

Heats	8 X 2 minutes	3 min. Lane change
Quarterfinal	8 X 2 minutes	3 min. Lane change
Semifinal	8 X 3 minutes	3 min. Lane change
Final	8 X 5 minutes	4 min. Lane change



6 TEAM RACE PROCEDURE

The race consists of qualifying and heats. The qualifying is done by one driver/ team, for 1 minute. The qualifying is based on laps and segments.

Duration of race about 4 hours (2 hours on Saturday and 2 hours on Sunday) divided in 16 heats of 15 minutes, 5 minutes lane change.

6.1 TEAMS

1. 2-4 drivers/ team.
2. Each team has a marshal.
3. Each driver has to make the following quantity of heats (no driver change during drive time):
 - team with 2 drivers 8 heats/ driver
 - team with 3 drivers minimum 5 heats/ driver
 - team with 4 drivers 4 heats/ driver

With 9-11 teams competing, there will be sit-outs, i.e. after the last lane the car has to be handed to the race direction immediately and will be handed back before the next heat. With 12 - 16 teams there will be 2 separate groups. If the teams are divided into two groups, the first group to run is the one with the lower qualified teams. The heats will alternate, i.e. the group with the lower qualified teams will run one heat first, then the group with best qualified teams will run one heat, and so on. For Sunday, for the beginning of heat 9, the teams are rearranged into the groups based on the Saturday results.

During lane change cars may not be touched. Repairs only during race time. During race time, one team-mate of each team in that group must marshal.

6.2 TECHNICAL SPECIFICATIONS

Group 27. Chapter 3 applies.

Exception: 2 bodies are allowed (same colour, same type). The reserve body must stay in Parc Fermé. It can be taken from there for the change, and then the other body must be replaced in Parc Fermé.



EUROPEAN CHAMPIONS

Grp.27			Grp.7	
1982			Lars Blomqvist	S
1983			Achim Burgmann	GER
1984			Achim Burgmann	GER
1985			Bernd Möbus	GER
1986	Martin Gramann	A	Lasse Åberg	S
1987	Achim Burgmann	GER	Lasse Åberg	S
1988	Alf Zoder	A	Lasse Åberg	S
1989	Martin Gramann	A	Martin Gramann	A
1990	Mario Schöne	GER	Mario Schöne	GER
1991	Alex. Chalupa	A	Mario Schöne	GER
1992	Mario Schöne	GER	Leo Hongisto	FIN
1993	Mario Schöne	GER	Leo Hongisto	FIN
1994	Anders Gustafson	S	Martin Gramann	A
1995	Gert Franssen	B	Juha Yli-Sipola	FIN
1996	Vlado Okali	SVK	Juha Yli-Sipola	FIN
1997	Lasse Åberg	SWE	Mario Schöne	GER
1998	Vladimir Horky	CZE	Mario Schöne	GER
1999	Kimmo Rautama	FIN	Anders Gustafson	S
2000	Vlado Okali	SVK	Vladimir Horky	CZE