

INTERNATIONAL FEDERATION OF MODEL AUTO RACING



GENERAL RULES FOR IFMAR WORLD CHAMPIONSHIPS

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GENERAL RULES FOR IFMAR WORLD CHAMPIONSHIPS

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GENERAL RULES FOR IFMAR WORLD CHAMPIONSHIPS

For the purpose of these rules, the R/C Car World Championship for all classes of radio controlled model cars will be referred to as the „World Championship“.

The Organiser(s) and Promotor(s) of the World Championship will be referred to as the „Organiser“.

1. GENERAL

1.1 IFMAR

The World Championship is sanctioned by the International Federation of Model Auto Racing (IFMAR).

IFMAR is the only body entitled to announce the official World Championship results.

IFMAR may act at any time during the preparation of the World Championship, during the World Championship and after the World Championship and change anything that IFMAR believes is against the interest of the sport, including the interpretation of existing rules of the World Championship if it is discovered that a rule can be used or interpreted against the sporting spirit of the World Championship.

Depending on the character and/or the urgency of the matter, IFMAR will consider the sporting interest before anybody's financial interest, including the Organiser's interest.

1.2 ORGANISER

The World Championship is materially organised by the Organiser. The Organiser is represented by the World Championship Organising Committee.

1.3 ALLOCATED PERIODS FOR WORLD CHAMPIONSHIP EVENTS

1.3.1 1/8th I.C. (gas) World Championships will be held during the first half of July alternately every two years, i.e. 1/8th off-road in the even years and 1/8th on-road in the odd years. The 1/10th I.C. (gas) on-road 200mm Nitro Touring Car World Championship will provisionally be held in the second half of July in the even years. The 1/5th I.C. (gas) on-road World Championship will be held in the odd years every two (2) years at a time to be agreed.

1.3.2 On-road electric and 1/10th off-road electric World Championships will be held during the first half of August alternately every two years, i.e. 1/12th and International Scale Touring Car on-road electric in the even years and 1/10th off-road electric in the odd years.

The on-road electric events will be run consecutively at the same venue in the following provisional order:

1/12th and International Scale Touring Car.

1.4 WORLD CHAMPIONSHIP CONTRACTS

- 1.4.1 The Contract between a World Championship Organiser(s) and IFMAR must be agreed to and signed at least twelve (12) months before the event.
- 1.4.2 At the time of signing, or twelve (12) months beforehand, the Race Sanction Fee of \$500.00 U.S. must be paid to IFMAR.
- 1.4.3 The \$2,000.00 U.S. Performance Bond must be presented to IFMAR not less than twelve (12) months before the event. The Performance Bond will be placed in an interest bearing account and is refundable, in full or in part, on the satisfactory completion of the event as adjudged by a majority vote of the IFMAR Executive.
- 1.4.4 An IFMAR Sanction Fee of \$US500 is required to be paid for each on-road electric event, i.e. 1/12th and International Scale Touring Car classes, plus a Performance Bond to the total amount of \$US2,000 covering both events. The \$US2,000 Performance Bond, or a portion thereof, will be retained by IFMAR if either of the two (2) on-road electric events is adjudged, by a majority vote of the IFMAR Executive, to have been completed unsuccessfully.

1.5 ORGANISATION

- 1.5.1 Twenty five (25) months prior to an IFMAR World Championship, the Bloc next on the rotation list will be invited by IFMAR to apply to host the World Championship. The invited Bloc will have a maximum of one (1) month to accept or decline this invitation. At eighteen (18) months, the Bloc must provide information on the venue and the organisational capabilities of the prospective organiser being considered. If the proposed venue is not acceptable to IFMAR, the Bloc will be advised and will then be invited to select another venue more suited to IFMAR's requirements. The Bloc must then submit details of an alternative venue within one (1) month of such notice by IFMAR. If an acceptable venue is not proposed within that one (1) month, the World Championship event will automatically be offered to another Bloc.
- 1.5.2 The host Bloc will be responsible to ensure that an IFMAR race organised within its region complies to all IFMAR rules and requirements and will oversee the organisation of the event. On the approval by IFMAR of the Bloc's selected venue, a guarantee security deposit of \$US1,000 will be payable by the Bloc to IFMAR and will be refundable, in full or in part, on the successful completion of the event as adjudged by a majority vote of the IFMAR Executive.
- 1.5.3 A representative of the host Bloc will give a Status Report on any forthcoming IFMAR World Championship to the Executives of IFMAR at a Committee Meeting held in the previous year.

Aspects of the Status Report to be covered are as follows:

 - a. Programme – Details of the timetable for the overall event with specific details on practice/qualifying/finals. (This timetable will be considered by the appropriate IFMAR Section Executive and, if any

request for deviation to the established timetable is received, it will be considered at this time). Outline specification of the portfolio to be sent to all countries, etc.

- b. Facilities – Details on the amenities provided at the venue for drivers/public/race officials and a separate private area for International Jury and IFMAR Meetings.
- c. Administration – Details on all aspects of race administration. This should cover such aspects as : Invites,/advertising, sponsorship, registration, insurance, first-aid, road maps showing venue, airports, ports, local hotels and camping sites, P.A. system, badges. List of approved frequencies and list of specific frequencies that cannot be used.
- d. Hospitality – Details of the hospitality to be offered to: IFMAR/EFRA/FEMCA/ROAR/FAMAR officials, drivers, mechanics, others. Opening/closing ceremony and any official functions planned
- e. Time Keeping – Details of the time keeping equipment to be used. This should cover such aspects as: Auto/manual back-up/results/reports, etc.
- f. Race Officials – Details of officials to be used. This should cover such aspects as: Referees (to be appointed by IFMAR, the host Bloc and host country’s Association). Race Director/Assistant Race Director/ Time Keeper/ Technical Inspector. It is mandatory that a separate official should be appointed for each of the above positions. The relevant IFMAR Section Chairman, under the authority of the IFMAR President, will appoint the following officials for each event: the Race Director and Time Keeping Supervisor, together with the time-keeping system to be used, after consultation with the organiser. Lap Counters/Track Marshal/Transmitter compound/ Transponder compound.
- g. Venue – Photos or photocopies of the venue showing facilities available. Drawings of the track layout showing direction of racing/ pit area/time keeping, etc.
- h. On-road electric World Championships - Advice on whether rule 5.1.22b of the 1/12th on-road electric or rule 6.3 of the International Scale Touring Car on-road electric World Championship Rules is to apply.

1.6 SCHEDULES FOR ORGANISATION

1.6.1 STAGE ONE: Not less than six (6) months before the designated race, this Report containing the following details will be distributed by IFMAR to the respective contact addresses of each IFMAR Bloc and placed on the IFMAR website and the organiser’s designated website, if such is available:

- a. The organiser’s name, address, fax and telephone number and email address.

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- b. A single contact point for all correspondence/enquiries
 - c. Details/location of the venue
 - d. Map of the area showing proximity of airports, port, roads, etc.
 - e. Basic details of race timetable and dates
 - f. List of race officials
 - g. List of approved frequencies and list of specific frequencies that cannot be used.
 - h. Advice on whether and what type of Concours d'Elegance competition will be held at the Opening Ceremony.
 - i. Practice facility
 - j. Details of accommodation (at least three (3) local hotels/motels of different grade which must include daily rate including all taxes, if applicable, and alternative accommodation, e.g. camping).
 - k. Any special accommodation deals, including all taxes, if applicable.
 - l. All information on Pre-World Championship event.
 - m. Information on transport available between hotel/s and track.
 - n. If event is for I.C. (gas) cars, advice on availability of fuel supplies at the venue. If so, whether supplies will be available pre-mixed and/or separately
 - o. Voltage used in host country. Drawings of plug types. The Organiser should have a supply of plugs/adaptors available for sale at the event.
 - p. Advice on the order in which the classes for the 1/10th Off-road World Championships will be run.
 - q. Advice on whether rule 5.1.22b of the 1/12th on-road electric or rule 6.3 of the International Scale Touring Car on-road electric World Championship Rules applies.
- 1.6.2 STAGE TWO: Not less than two (2) months before the designated race, the organiser will send this Report directly to the IFMAR Secretary, the respective contact addresses of each IFMAR Bloc and to all competitors. This is to be carried out in the following form: (i) by airmail, either in the form of a hard copy, a CD Rom or a floppy disk or (ii) as an email attachment. The Report will contain the following details:
- a. Detailed schedule and dates
 - b. Diagram of track indicating length, width and direction of racing
 - c. Drawing of the venue (preferably photograph) showing track, rostrum, pit area, timekeeping and general facilities
 - d. The appropriate IFMAR Section rules
 - e. Alternative accommodation, camping, etc.
 - f. Any further special accommodation deals
 - g. Any other information as required by IFMAR Section rules (e.g. IFMAR Muffler List, IFMAR 1/12th and International Scale Touring Car electric Bodyshell List, IFMAR Approved Motor and Battery List, IFMAR 1/10th I.C. 200mm Bodyshell List, IFMAR 1/5th I.C. Bodyshell List).
 - h. Advice on whether each competitor is required to bring or mail one passport-sized photograph of him/herself and any mechanics or Team Manager for attachment to identity badges.
 - i. Map of area

giving clear directions on how to reach the World Championship venue and the top three listed hotels from the nearest airport/port.

1.7 COMPETITORS

- 1.7.1 Only National Bodies affiliated with FEMCA, ROAR, EFRA and FAMAR and affiliated member countries can enter competitors into the World Championships.
- 1.7.2 The number of competitors will be 150 (100 for 1/12th on-road electric). Places must be initially allocated as follows: For 150 entries: 12 IFMAR (including the defending Champion and each affiliate member country will be entitled to a minimum of two ((2)) places). 32 EFRA, 32 ROAR, 32 FEMCA, 32 FAMAR 10 Host Bloc For 100 entries: 10 IFMAR (including the defending Champion and each affiliate member country will be entitled to a minimum of two ((2)) places) 20 EFRA, 20 ROAR, 20 FEMCA, 20 FAMAR 10 Host Bloc After distribution of the twelve (12), (ten ((10)) for 1/12th electric on-road), IFMAR places to the defending Champion and any affiliate member countries, the remainder of the twelve (12), (ten (10)), IFMAR places are to be distributed by the relevant IFMAR Section Chairman on a fair and equitable basis according to any extra requirements of the Blocs. All unused allocations will be returned to IFMAR for distribution on an equal basis between the Blocs. If there are any unused places still available prior to the commencement of free practice at a World Championship event and a driver who has not entered previously wishes to compete, he may request one (1) of the unused places only through his Bloc representative. The allocation request will be confirmed or denied to the Bloc representative by IFMAR. The member Blocs have the power to veto allocation of such unused places.
- 1.7.3 The number of competitors by country is defined by FEMCA, ROAR, EFRA and FAMAR.

1.8 WORLD CHAMPIONSHIP ENTRY FORMS AND ENTRY FEES

- 1.8.1 Entry forms will be supplied by IFMAR to each Bloc no later than six (6) months prior to the event according to the Blocs' requests up to the initial maximum in Rule 1.7.2.
- 1.8.2 Entry forms and fees to be sent to and processed by IFMAR.
- 1.8.3 Entry forms must be completed and paid by each Bloc and received by IFMAR four (4) months prior to the World Championship event. No exceptions will normally be allowed. The remaining (not taken) and discretionary places will be distributed by the relevant IFMAR Section Chairman on an equitable basis between the Blocs willing to have allocations over the initial figures. These entries must be completed and paid three (3) months prior to the event.
- 1.8.4 Name changes may be made up to ten (10) days prior to the event. If a special request for a change of competitor's/entrant's name is received within the ten (10) day period exclusively by the designated Bloc officials

and from within a Bloc, this request must be passed to the relevant Section Chairman for a decision on a decline/approval.

1.8.5 Any allocations not taken up and notified to IFMAR by the three (3) month limit will automatically go to the host Bloc for redistribution.

1.8.6 Within fifteen (15) days of the cut-off dates, IFMAR will forward to the race Organiser the entry forms and fees and notify them of any allocations not taken up.

NOTE: \$40.00 U.S. of each entry fee will be retained by IFMAR.

1.8.7 Entry fees will be: -

(i) \$175.00 U.S. maximum (which includes one (1) banquet ticket) for the following World Championship events: 1/8th on-road, 1/8th off-road, 1/5th on-road, 1/10th on-road.

(ii) \$200.00 U.S. maximum (which includes one (1) banquet ticket) for the following World Championship events: (a) 1/10th off-road electric World Championship events covering 2WD and 4WD classes, (b) 1/12th on-road electric and International Scale Touring Car on-road electric classes. The entry fee will comprise \$150.00 U.S. for the first class entered with one (1) banquet ticket and \$50.00 U.S. for the second class entered with no additional banquet ticket. No refunds will be given for any unused banquet tickets.

1.8.8 Invoices for entry fees in U.S. Dollars will be issued to each bloc and shall be payable to the IFMAR Bank Account. No refunds.

1.8.9 Entry forms and invoices will be issued by the IFMAR Secretary and Treasurer. Each entry must include the entrant's name, postal address or email address, three (3) frequencies allowed to be used at that particular event and the entrant's personal transponder number, if available. Entries and payments can only be accepted from FEMCA, ROAR, EFRA, FAMAR and affiliate member countries which must be current financial members of IFMAR. No individual entries allowed.

I.9 TROPHIES

1.9.1 Details of trophies to be awarded at the Awards' Banquet to ALL competitors must be submitted to IFMAR for approval including a Top Qualifier's trophy for each class and Concours d'Elegance trophy/ies, if such competition is to be held. Details, in the form of a catalogue or photographs showing dimensions such as height and giving approximate cost must be sent to the Section Chairman of the appropriate IFMAR Section six (6) months before the event. It will be the Section Chairman's responsibility for approval and to advise the Organiser of his decision.

1.9.2 The organisers of I.C. World Championships shall award trophies to the top thirty eight (38) finishers for the 1/8th I.C., 1/5th I.C. and 1/10th I.C. on-road and the top thirty four (34) finishers for 1/8th I.C. off-road.

1.9.3 The organisers of Electric World Championships shall award trophies to the top thirty (30) finishers for the 1/12th on-road electric and to the top forty (40) finishers for the International Scale Touring Car on-road electric and 1/10th off-road electric.

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- 1.9.4 IFMAR will provide sufficient engraved boxed presentation IFMAR medallions to the organiser at no cost to be Individually awarded to all competitors at the Awards' Banquet.

1.10 RULES

- 1.10.1 World Championship rules must be distributed at least twelve (12) months prior to the event. Any proposed amendments must be received by IFMAR at least eight (8) months prior to the event.
- 1.10.2 No change to the rules or homologations will be permitted within four (4) months of a World Championship event, irrespective of the Section. Any rule changes (due to blatant errors, unforeseen circumstances or urgent matters) during the period of four (4) months prior to the event may be made with a unanimous vote of the voting member Blocs.
- 1.10.3 IFMAR will supply the organiser with an IFMAR rule book. The Organiser will have copies of the racing and technical rules printed and forward one to each competitor by airmail post two (2) months before the event, together with appropriate up-to-date Section homologation lists. Additional rule books must be available on request at the time of registration of drivers.

1.11 SAFETY

The safety of the spectators is of prime importance and must be considered when laying out track and spectator areas. The safety of officials, helpers, competitors and accompanying people is of equal importance but it is assumed that they are more aware of the potential danger. Spectators, competitors and officials must be efficiently protected against the cars by adequate barriers. Track markers must be shaped and placed in a way that prevents cars from being projected into the public when hit at full speed. Technical inspection must always include the safety aspects of the cars. No sharp edges or other protruding parts of the cars that may cause serious injuries in case of an accident are permitted. First-aid supplies must be available throughout the event (including practice), in case of necessity. A First-aid Officer must be present throughout. Police and ambulance services must have access to all areas, both public and restricted. A copy of the Insurance Certificate must be enclosed with the Contract for the event.

1.12 REFEREES

- 1.12.1 One (1) IFMAR Referee will be appointed by IFMAR to an IFMAR World Championship event. The organiser does not appoint the IFMAR Referee. The IFMAR Referee will be required to be in attendance at the event one (1) day prior to the commencement of heats and to depart on the day following conclusion of the event. Travel and accommodation expenses for the IFMAR Referee will be paid for by IFMAR, EFRA, ROAR, FEMCA and FAMAR equally. Ninety (90) days prior to the event a budget

proposal in U.S. dollars must be submitted by the appointed Referee to the IFMAR Treasurer for approval by EFRA, ROAR, FEMCA and FAMAR. Only the following expenses will be considered: (a) One (1) Apex return economy airfare or equivalent; and Hotel/motel accommodation for one (1) person at the official W.C. hotel/motel or cheaper; plus A maximum payment of \$US30.00 per day for out-of-pocket expenses OR (b) One (1) suitable package deal (airfare and accommodation) for one (1) person; plus A maximum payment of \$US30.00 per day for out-of-pocket expenses. Expense allowance may be drawn in advance. Final settlement will be made on receipt of travel and accommodation accounts. The IFMAR Referee will be supported by two (2) appointed Deputy Referees, one nominated and paid for by the host Bloc and one nominated and paid for by the host country's Association.

- 1.12.2 The IFMAR Referee has the right to use his discretion to issue a penalty instead of a warning for any serious infringement of the rules.
- 1.12.3 The IFMAR Referee has the right to issue penalties for pit lane infringements. The penalties will range from time in seconds to a one (1) lap penalty.
- 1.12.4 The IFMAR Referee has the authority to withdraw a World Championship badge (pass) from any person contravening the World Championship Rules or spirit of the World Championship Rules.
- 1.12.5 The IFMAR Referee has the authority to instruct other race Officials to take remedial action in any situation which might compromise the well running of the race meeting. Any serious situation will be referred to the most senior IFMAR Official present before taking any action.
- 1.12.6 The IFMAR Referee is officially on duty from the commencement of controlled practice until the official conclusion of the event and, if requested by the Chairman of the International Jury, he will attend International Jury Meetings.
- 1.12.7 For each IFMAR World Championship in any one year, it is preferable that different persons are selected and appointed to act as the IFMAR Referee.
- 1.12.8 Immediately following the selection of a World Championship organiser, the relevant IFMAR Section Chairman will request EFRA, ROAR, FEMCA and FAMAR to each nominate a suitable person to be appointed by IFMAR as the IFMAR Referee for that event.
- 1.12.9 The relevant IFMAR Chairman is required to contact the nominees to enquire if they are willing to carry out the IFMAR Referee's duties for the event, explaining that the appointment will have to be approved by the relevant Section Committee.
- 1.12.10 The relevant IFMAR Chairman will distribute a questionnaire to his IFMAR Committee to obtain a majority decision on the selection of the IFMAR Referee from the nominations received.

1.13 VOTING

For the purpose of voting on matters concerning each Section, each Bloc shall have equal vote of one per Bloc. Majority is required to carry a vote.

1.14 INTERNATIONAL JURY MEETINGS

The relevant IFMAR Section Chairman shall always act as Chairman during International Jury Meetings and exercise a casting vote, if necessary. In the absence of the relevant IFMAR Section Chairman, the highest ranking IFMAR official shall take the chair at any International Jury Meetings. (See Section Rules for further details).

INTERNATIONAL FEDERATION OF MODEL AUTO RACING



ELECTRIC TRACK RULES

Last Amended: 18th of June 2004

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IFMAR ELECTRIC TRACK RULES

(to be read in conjunction with

1. General Rules for IFMAR World Championships)

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SECTION TWO - ORGANISATION & FORMAT

2 RACE FORMAT

2.0.1 The IFMAR Electric Track World Championships provisionally starts with the 1/12 class in the first 3 days, tThe ISTC class is run on the last 4 days of the event.

2.1 RACE PACKAGE

2.1.1 Upon arrival and registration each driver will be given a race package which contains:

- a. A set of numbers for his radio controlled car PLUS three additional sets.
- b. Two sets of participant identification numbers for wing or spoiler.
- c. One identification badge for driver and one for mechanic.
- d. First „T-Time“ practice session time.

2.2 IDENTIFICATION NUMBERS

2.2.1 Each competitor will display his identification number in at least three positions so that they can be seen from the right and left sides and the front of the car. This number will remain the same through the entire event.

2.2.2 Numbers must be at least 25mm with a minimum stroke of 3mm and must be black numerals on a white background of at least 20x40mm or as supplied by race control. Every competitor must have their national flag displayed on the left side of their wing or spoiler.

2.3 BADGES

2.3.1 Two badges will be given to each competitor, one blue for driver and one yellow for mechanic.

2.3.2 Access to the pits and track will be restricted and badges must be worn at all times.

Badges will be issued as follows:-

Blue (Drivers)	Drivers stand, pits, staging area, track.
Yellow (Mechanics)	Pits, staging area, track.
Green (Press)	Pits, staging area, viewing area.
White (Team Manager)	Pits, staging area, viewing area.
Red (Race Official)	All areas.
Grey (IFMAR Official)	All areas.

2.4 OFFICIAL ANNOUNCEMENTS

2.4.1 All official announcements must be made in English.

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- 2.4.2 Referees must be provided with a monitor to show race progress and a microphone linked direct to a speaker mounted on the driver's stand. This is to enable drivers to hear any warnings issued.

2.5 HEATS

2.5.1 There will be fifteen heats of ten drivers each. They may be divided into two groups: Group A - Heats 1 to 7, Group B - Heats 8 to 15.

2.5.2 There will be six rounds of qualifying heats.

2.5.3 Starting positions; during the first round of qualifying, heat starting positions will be determined by the times achieved overall during the controlled practice rounds. During further qualifying rounds, heat starting positions will be by the overall fastest time of drivers in their heat.

2.5.4 If the race is held on carpet, each driver's best 2 (out of 6) numbers of laps plus finishing time will determine their qualification position.

On other surfaces a driver's point score will place the driver in a final according to the following system. In each round, drivers will score points based on the laps and times achieved in relation to all other drivers.

Fastest driver in each round will score: 155 points

2nd fastest will score: 153 points

3rd fastest will score: 152 points

4th fastest will score: 151 points

and so on, scoring one point less for each driver down to last qualifying position.

If a driver does not start a heat, he receives no points. No change to the scoring method will be made if less than 150 drivers enter the World Championship. In each round, in case of a tie, the points will be equally awarded to each driver with the same lap and time score. The first driver not in the tie will score points according to their position in the qualifying list. For example:

Fastest driver 8 laps 5:10.00 will score 155 points

2nd fastest driver 8 laps 5:12.00 will score 153 points

3rd fastest driver 8 laps 5:14.00 will score 152 points

4th fastest driver 8 laps 5:15.00 will score 151 points

5th fastest driver 7 laps 5:01.00 will score 150 points - TIED

6th driver 7 laps 5:01.00 will score 150 points - TIED

7th driver 7 laps 5:01.00 will score 150 points - TIED

8th fastest driver 7 laps 5:04.00 will score 147 points

A driver will discard his worst scores based on the qualifying rounds completed to the following rules:

Out of five (5) completed rounds, the best three (3) scores will be added to decide a driver's qualifying position.

Out of six (6) completed rounds, the best four (4) scores will be added to decide a driver's qualifying position.

Out of seven (7) completed rounds, the best four (4) scores will be added to decide a driver's qualifying position.

Out of eight (8) completed rounds, the best five (5) scores will be added to decide a driver's qualifying position.

Out of nine (9) completed rounds, the best six (6) scores will be added to decide a driver's qualifying position.

In the case of a tie in the final qualifying positions when the drivers best scores are added together, only the scores (and the laps and times used to determine those scores) will be used to break the tie. The discarded scores, laps and times will not be used to separate a tie. The driver with the highest single points score from the scores added will be awarded the tied position. In the case of a continuing tie, the next best scores will be considered. All best scores will be considered until the tie is broken. If a comparison of points fails to break the tie, the laps and times from the highest points will be compared.

The driver with the fastest lap time from their highest score will be awarded the tied position. Example: -

Driver	Points	Score	Total	Fastest Lap Time
A	150,146,130,148	574	8 laps	5:10.00
B	148, 147,136,143	574	8 laps	5:14.00
C	149,145,131,147	572	8 laps	5:12.00
D	145,131,147,149	572	8 laps	5:16.00

Note: Driver A qualifies ahead of Driver B due to a higher single point score Driver C qualifies ahead of Driver D due to a better fastest lap time.

2.6 PRACTICE

- 2.6.1 There will be one day of practice (t-time, controlled practice) for each class. The track will not be available prior to commencement of each event.
- 2.6.2 Track layout must be at least 60% new in layout/design at the start of the event.
- 2.6.3 Practice will be organised using the „T-Time“ format. Under these arrangements the following parameters will be used:
 - a. Each segment will be restricted to 10 minutes (1/12) and 7 minutes (ISTC).
 - b. Drivers only to be allowed to sign up for „T-Time“ practice.
 - c. A maximum of 15 cars to be allowed on the track during any one segment.
 - d. Drivers will only be allowed one frequency per segment.
 - e. The first „T-Time“ practice will be allocated by the organisers.
- 2.6.4 All the IFMAR Technical Rules apply during Controlled Practice, including the use of batteries and motors from the IFMAR Approved List which have been checked (and marked where necessary) by Technical Inspection.

2.7 FINALS

- 2.7.1 The World Championship final will be composed of three (3) separate races composed of the top ten (10) qualifiers after completion of qualifying. At the organiser's discretion, the lower finals need only be run two (2) times.
- 2.7.2 All finals will be of ten (10) drivers.
- 2.7.3 The final positions will be decided by a point system based on ten (10) points for the winner of each final on down to one (1) point for the tenth placed finisher in each separate final. Best two (2) out of three (3) finishes will count (the best out of two (2), if lower finals are run only two (2) times) with the tie breaker being the finishing position of the third (second) final. In the event of the need of a further tie breaker, the laps and times of the best two (2) out of three (3) heats will be used.

2.8 RACE DURATION

- 2.8.1 1/12 track: All heats and finals will be eight minutes, plus maximum of 30 seconds to finish the last lap. There will be a three minute break between heats.
- 2.8.2 ISTC 1/10: All heats and finals will be five minutes, plus maximum of 30 seconds to finish the last lap. There will be a three minute break between heats.

2.9 STARTS

- 2.9.1 All starting announcements and warnings will be in English.
- 2.9.2 Count down for the starts will be as follows:-

During Qualifying	During Finals
2 minutes	2 minutes
1 minute	1 minute
30 seconds	30 seconds
10 seconds	10 seconds
Attention	Attention
One	START
Two	
Three (etc.)	
- 2.9.3 During Qualifications the „staggered start“ system will be used. Each car will start separately, within 5 seconds after its number is called. If for any reason a car did not start, the time counting for this car will begin automatically the moment one of the other cars has completed its first lap.
- 2.9.4 During the finals the starting grid will be five staggered rows of two cars each. Positions to be determined by qualifying results.
- 2.9.5 There will be no restarts due to jump starts.
- 2.9.6 During the finals a video record will be made of all starts for review by the Referees if necessary.
- 2.9.7 There will be a one metre penalty line for jump starts. Any car crossing that line before actual start will receive a one lap penalty. Any car jump

starting but not crossing the one metre line will receive a ten second penalty.

- 2.9.8 At the 30 second warning all cars must be placed on the starting line. After the 30 second warning no cars will be allowed entrance to the racing surface until after the start of the race, at which time the mechanic may place the car on the starting grid after all the cars have left.
- 2.9.9 The start will be by an audible signal.
- 2.9.10 Any race stopped due to race equipment malfunction or official's error will be re-run after a suitable delay.
- 2.9.11 Drivers must stand in the correct car number position as marked on the rostrum.

2.10 MARSHALLING

- 2.10.1 Marshalling shall be provided by the racers. The Race Organisers will provide 2 designated fill-in marshals to cover unforeseen eventualities. After each heat the participants in that heat will place their cars into impound and assume assigned marshalling positions for the following heat. No other person is allowed on the track (except officials) while the race is in progress.
- 2.10.2 When there is a break, staggering of heats or a change in the running order of heats, any driver that is responsible for marshalling will be properly notified either in person or through his country's Team Manager.
- 2.10.3 Any person not marshalling or providing a qualified marshal shall lose their fastest qualifying time.

2.11 RESULTS

- 2.11.1 Results of each heat will be posted upon completion of the final and review by the officials.
- 2.11.2 The results sheet will include time, laps and finishing positions.
- 2.11.3 Results of each of the sub main World Championship finals will be posted following completion of each final and review by IFMAR officials.
- 2.11.4 As soon as the IFMAR officials have reviewed the results of the three World Championship Finals and verified such results, the official finishing positions and points will be announced and the World Champion will be presented on the podium.
- 2.11.5 Awards and complete introduction of competitors and their final placing will be at the awards banquet following finals.

2.12 TRANSMITTER IMPOUND

- 2.12.1 All transmitters must be placed in impound upon arrival at track. Transmitters will be furnished to each competitor after completion of technical inspection and prior to their heat.
- 2.12.2 Transmitters in the pit areas or areas other than the drivers stand and impound, during official competition hours will cause disqualification.

2.13 TRANSMITTER INSPECTION

- 2.13.1 All transmitters must be tested and inspected prior to their use. A spectrum analyser will be used for radio tuning inspection. All transmitters passing inspection will be identified and only those transmitters thus identified may be used in the event.

2.14 LAP COUNTING AND TIMING

- 2.14.1 Automatic lap counting, with cumulative and split lap times, will be in place for each car. Competitors are required to install a small transponder into their cars according to the organiser's instructions. An audio/video tape recording will be made.

Every competitor is allowed to use his own IFMAR approved personal transponder if the lap counting officials are informed and agree.

If an organiser is using a personal transponder system, he has to provide to all participants not having their own transponder, a transponder for every heat or final free of charge. It is strictly forbidden to ask for a rental fee. A deposit of the replacement value for the personal transponder may be demanded. If a competitor by any reason destroys or does not return a personal or normal transponder, he loses his deposit.

The driver has to ensure that his personal private transponder belongs to the marked chassis.

Significant stops (tyre changes, crashes, etc.) will be noted with times of stop and restart. This record might not include every incident, however, its intent is to verify incidents, whenever possible. AMB lap counting system or IFMAR approved equivalent must be used in duplicate.

A suitable working computer with proper race proven programmes must be provided to sort lap times, print results from heats and sort final positions from each round of heats within 15 minutes of the completion of the round of heats.

Chronometers must give time to 1/100th of a second, in all cases, the hundreds will be utilised.

In the case of equal results, the following best heat will separate the competitors.

If both the primary and support lap counting systems fail during a qualifying heat or final, the heat or final will be re-run as soon as is practicable. Under no circumstances will any lap score or time, other than those from the official time keeping equipment, be accepted for any purpose to do with the running of an IFMAR race.

2.15 PROTESTS

- 2.15.1 Lap count checking need not be written and does not need a deposit. The Team Manager will, within ten minutes of the display of the results, show to the race direction officials the time lap sheet involved (the one displayed by the officials) and will indicate where he thinks an error has been made. This must be shown to the Race Director or scoring official. If the request is justified, correction will be made immediately. The race

official will advise in writing the result of their finding and the time will be noted. After the checking, if the Team Manager persists, he may then submit a written protest along with a US\$50 protest fee. The request will then be processed as a formal protest.

- 2.15.2 Formal protest, must be done within ten minutes after the display of the results or the occasion it concerns, in writing and with a US\$50 protest fee. Protest must be in English. The time of the display will be written on the result sheets and protests must be made within ten minutes of that time. The protest fee is forfeited if the protest is not upheld, and returned if justified. The protest may be given to the Race Director or to an IFMAR official. Protests are processed by the Race Director and if necessary the IFMAR International Jury. Appeals against the Race Director's decision may be made to IFMAR. IFMAR is obliged to handle such an appeal.

2.16 DISPLAY OF RESULTS

- 2.16.1 At the end of each heat and final, and after official review, the results will be displayed for the competitors for checking and information. The result sheet will include lap times and finishing positions. The display sheet will also display the official time of posting.

2.17 CAR NUMBERS AND LAP COUNTING TRANSMITTERS

- 2.17.1 Only the numbers supplied by the organizer will be used on the car.
- 2.17.2 Each competitor is responsible for attaching the lap counting transponder to his car.
- 2.17.3 During qualifying any car without a transponder or with a personal transponder that has not been plugged in will not be counted.
- 2.17.4 During the final(s) all cars must have transponder firmly attached at the start of the race. In the event of the loss and/or failure of transponder the car will be manually counted.
- 2.17.5 Under no circumstances will a heat or final be re-run due to a car not having a transponder or failing to plug in a transponder or failure of such. This also applies to a car having an incorrect number.

2.18 FREQUENCIES

- 2.18.1 Only fixed frequencies to be allowed.
- 2.18.2 In the case of two or more drivers qualifying for the same final with the same frequency, the higher placed driver will keep his frequency and the lower placed driver(s) must change.
- 2.18.3 For the World Championship Final all frequencies of the finalists will be known only to the Race Director and Technical Inspector.
- 2.18.4 The lower placed driver who will not or can not change will not take part in their final for which they qualified.
- 2.18.5 If a driver must change his frequency before the start of a final due to an error by the organization, he will be allowed ten minutes. If the driver has found his radio defective or has made an error in the selection of his

frequency at the start of a heat or final the race will not be delayed. The Race Director may delay the start, due to radio frequency, for a frequency inspection.

- 2.18.6 Anyone on other than assigned frequency will not be allowed to start the final or heat.

2.19 PENALTIES AND SANCTIONS

2.19.1 Black flag (removal of car from track) may be issued for the following reasons;

- a. Drivers who impede the progress of other drivers.
- b. Un-sportsmanlike driving.
- c. Participants driving in a manner deemed to be dangerous.
- d. Vehicles judged to be in an un-driveable or dangerous condition by the Race Director. These vehicles, after being repaired, may be allowed to re-enter the track after permission by Race Officials.
- e. Vehicles losing their body must immediately leave the track and carry out necessary repairs before re-entering track.
- f. Any illegal modifications or changes made to the vehicle which are found during technical inspection at the end of a heat or final will automatically cause disqualification.
- g. Any vehicle which, by the fault of another driver, is damaged or obstructed during a heat or final will not, under any circumstances, be allowed to re-run in another heat.
- h. All participants must strictly observe the instructions and warnings by the Race Director and Referees.
- i. The bad behaviour and/or deportment of any competitor, even outside an official race meeting, which could injure the promotion of the sport, may become the object of an official national or international sanction.

2.20 PIT SPACES

2.20 Pit spaces are to be allocated by the organiser for the duration of the World Championships. A minimum of 12.5 square feet of table space with a minimum depth of two feet must be provided for each competitor.

2.21 IFMAR MEETINGS

2.21 Minutes of the IFMAR section meeting held during the time of the event are to be prepared and circulated for comment, correction and agreement by the authorized person from each bloc before the end of the WC event at which the meeting is held. The approved minutes will be distributed by the IFMAR Section Chairman to the blocs within (1) month of the completion of the event.

SECTION THREE - OFFICIALS

3 OFFICIALS

3.1 RACE DIRECTOR

- 3.1.1 The race Director is under the direct authority of IFMAR and must be approved by:- (FEMCA/ROAR/EFRA) as appropriate.
- 3.1.2 The Race Director within the schedule of the event is responsible for insuring that the various tasks under his responsibility are correctly done. These include the following:-
 - Time Keeping
 - Starts
 - Marshalling
 - Display of results
 - Announcements
 - Technical inspection
 - Frequency control
- 3.1.3 Receive any protests and call the International Jury, if necessary.
- 3.1.4 Make urgent decisions for safety or unforeseen situations.

3.2 TIME KEEPING SUPERVISOR

- 3.2.1 The Time Keeping Supervisor is responsible for recording all laps, times, and results of all drivers in all heats and finals. He is responsible for classifying the results and setting up the mains. The Race Director must verify this classification and selection.
- 3.2.2 After the end of all heats and sub-finals the Supervisor will review the results before displaying.
- 3.2.3 In the case of a request for checking results, the Time Keeping Supervisor, along with the Race Director, will check the questioned result and make a decision.

3.3 REFEREES

- 3.3.1 One (1) IFMAR referee will be appointed by IFMAR. Travel and accommodation expenses will be paid for by IFMAR, EFRA, ROAR, FEMCA and FAMAR equally. The IFMAR referee will be supported by two (2) appointed deputy referees, one nominated and paid for by the host bloc and one nominated and paid for by the host country's association (see general rule 1.12). They must be unbiased and experienced persons with a good knowledge of the English language and the current IFMAR rules. They must have driving experience in electric track racing.
- 3.3.2 A back-up Referee must be nominated by each organization in case of temporary absence of official Referees.
- 3.3.3 The main task of the Referees is to observe the racing and in particular the good sportsmanship during the racing. They will ensure that the correct rules are observed by everybody.

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- 3.3.4 The Referees may be called for information by the International Jury when a meeting is called by the Race Director.
 - 3.3.5 Referees may not be participants in the event or serve in any other official capacity.

3.4 REFEREES DUTIES

- 3.4.1 At all times during the qualifying heats and sub-finals, 2 of the 3 Referees present will be watching and observing the racing from start to finish. During the World Championship finals 3 Referees will observe the race from start to finish.
- 3.4.2 A Referee may issue warnings and instructions. A Referee may take action after an initial warning but in all cases a maximum of three warnings means automatic disqualification from the event. Any appeal against the Referee's decision must be made to the International Jury accompanied by protest fee.
- 3.4.3 A Referee will be responsible to ensure that no race is allowed to start without all marshals in position.

REFEREE GUIDELINES REGARDING OFFENSES WARNINGS:

1. Bad sportsmanship during the race, ie: impeding the progress of other participants, deliberate slowing down or waiting for another car with the intent of impeding or hitting another car, deliberate crashing with another car, deliberate corner cutting, and reckless driving.
2. Unsportsmanlike conduct and behaviour of drivers and mechanics involved in the racing.
3. Mechanics going on to the track during the race.
4. Any combination of three warnings will cause disqualification.

INSTRUCTIONS:

1. Cars that do not conform to the regulations before the start or during the race (example: loss of body).
2. Cars that are un-driveable or in dangerous condition due to damage or malfunction of the car.
3. Starting procedure, writing down early starts and reporting them to the Time Keeper.
(Time Keeper and Starter are responsible for starting penalties.)
4. It is not the responsibility or duty of the Referees to check if the cars conform to the technical specifications. This is the responsibility of the Technical Inspectors.
5. All warnings and instructions will be announced in English by the Referee using a microphone linked direct to a speaker mounted on the drivers stand.
6. Each participant must be able to understand and recognize the words WARNING and INSTRUCTION.

3.5 REFEREES AUTHORITY

- 3.5.1 The Referee issues warnings and ultimately may issue a black flag (disqualification) if necessary or when his warnings are not effective.
- 3.5.2 Warnings and instructions are announced by the Referee and he keeps a record of the warnings and instructions issued. Repeated warnings (3) will lead to disqualification from the competition. Instructions must be observed and obeyed immediately. All announcements will be made in English.
- 3.5.3 Reason for warning will be announced at time of issue. Further explanation, if required, will be given to the driver or Team Manager at the end of the race.
- 3.5.4 Under no circumstances may a warning or instruction by the Referees lead to an interruption of the race.
- 3.5.5 During the main event only, if two out of the three Referees agree, they will have the authority to black flag an entire team. If one member of that team is positively interfering with the racing of another car in that event.
- 3.5.6 Appeals to the decision of the Referees must be made in writing and presented to IFMAR. IFMAR is not obligated to act on such a protest.

3.6 INTERNATIONAL JURY

- 3.6.1 The International Jury consists of official representatives from ROAR, EFRA, FEMCA and FAMAR. Each bloc will have a total of one vote.
- 3.6.2 The Chairman of the Jury is the IFMAR President. In his absence the next highest ranking IFMAR Official, not already serving on the Jury, will be the Chairman. The IFMAR President may appoint a representative as Chairman in his absence if an IFMAR Official (not already on the Jury) is not available. The Race Director and Chairman are members of the International Jury but do not have a vote in the decisions. The Referees may be called by the Jury for opinions and explanations as deemed necessary. All decisions are by a simple majority vote. The Jury can request evidence and/or drivers presence pertaining to matters involved. Prior to the commencement of an International Jury Meeting, any mobile telephones in the meeting room must be turned off and placed on the meeting table until after the completion of the Meeting.
- 3.6.3 Jury members must be approved by their organisations.

3.7 RESPONSIBILITY OF THE INTERNATIONAL JURY

- 3.7.1 To decide in unforeseen situations.
- 3.7.2 To handle protests not covered by the Race Director's responsibility.
- 3.7.3 To change the race procedures or cancel the race whenever this is required due to safety aspects.
- 3.7.4 To see that the race is run according to the official IFMAR rules.
- 3.7.5 To make the decision on interrupting or cancelling a race due to rain or other weather conditions.
- 3.7.6 The Chairman of the International Jury will make official the results of the World Championship through the ranking IFMAR official available.

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- 3.7.7 International Jury members may not have dual duties of being a race official (other than Race Director) or Referee. Jury members may be participants in the event but must allow an auxiliary representative to serve in any protests that concerns the jury member as a participant.

SECTION FOUR - TECHNICAL RULES GENERAL

4.0 TECHNICAL RULES GENERAL

4.1 TECHNICAL INSPECTION

- 4.1.1 All cars must be presented for technical inspection immediately after completing their heat. It is not allowed to take the cars into the pit area before presenting it for technical inspection.
- 4.1.2 All cars must be presented for technical inspection at the end of each final.
- 4.1.3 All motors and batteries to be inspected as necessary during qualifying and mandatory during the finals.
- 4.1.4 All cars in the World Championship finals will be impounded at the end of the finals for further technical inspection, such as motors, etc.
- 4.1.5 Only one car per driver per class is allowed. All cars must be presented to Technical Inspection for an Initial Inspection before the start of Controlled Practice. The purpose of this Initial Inspection is to determine that the car meets the IFMAR Technical Rules for this event. When the car passes this Initial Inspection, the chassis of the car will be marked by the Technical Inspector. Marks which are made by engraving, and/or removal of chassis material, are to be avoided. A driver may refuse to have their chassis marked by methods which include removing chassis material. Once the chassis is marked, the chassis may not be changed without the approval of the Race Director. The chassis may only be changed in the case of damage which cannot reasonably be repaired. Drivers must race the car he or she passed technical inspection with during qualifying and finals in accordance with the rules above.

4.2 BATTERIES APPROVAL

- 4.2.1 The deadline date for submitting batteries (cells) to be approved for that year's World Championship is four (4) months prior to the date of the Opening Ceremony of the World Championship. Applications for approval must be submitted to IFMAR.
- 4.2.2 The following requirements must be met at the time of submittal: A minimum of 100,000 individual cells must have been sold (by the person/company requesting approval) to commercial outlets in the retail or distribution sector of the hobby industry.

A list of telephone numbers and addresses of retail suppliers from whom the cells can be purchased must be submitted with the application. The submittal for approval must conform to the procedure current at the time for IFMAR approval - copies available on request.

The submittal for approval must contain a written technical specification from the original cell manufacturer for verification.

4.2.3 One (1) sample of each product and paperwork submitted for approval to be supplied by the IFMAR Electric Section Chairman to the appropriate IFMAR Electric Section representative in EFRA, ROAR and FEMCA to be checked that they comply with the rules. If a product meets all technical specifications and IFMAR availability requirements by a majority of the voting Blocs representatives, it will be included on the Approved Product List for use at WC events.

4.2.4 Batteries Technical

Cells must be sub-C size, rated nominally at 1.2 volts and dimensioned nominally at 43 mm length and 23 mm diameter with heat shrink fitted. No modifications allowed to the outer or inner cell construction or modifications to the chemical composition. Soldering for connections and wire is allowed.

4.2.5 All cells must be submitted to Technical Inspection for checking and marking prior to being used during Controlled Practice, Qualifying and Finals. This may be completed at any time. Cells which do not bear the Organiser's mark may not be used for Controlled Practice, Qualifying and Finals.

The Organiser and IFMAR Officials may check the legality of a competitor's cells at any time during the WC event.

A weight scale will be available at all times during the event for competitors to carry out weight checks on cells.

4.2.6 IFMAR shall produce an Approved Product List which lists all the cells eligible for that year's IFMAR WC events. This Approved Product List (including the eligible date codes) shall be distributed to all competitors in the race acknowledgement package no later than two (2) months prior to the WC event.

4.2.7 Cells may not be charged or changed during the race.

4.2.8 Cars will be driven by a maximum of 6 cells and 7.2 volts maximum. For 1/12 the numbers of cells is limited to 4.

4.2.9 A receiver battery pack to power the receiver and Servo is allowed in any configuration. Under no circumstances may power from the receiver pack contribute to the power to the motor.

4.3 MOTORS;

Only IFMAR approved motors may be used. Approved motors must meet the following specifications and be commercially available four months prior to the World Championship. Availability requirements must be met at the time of submittal. Submittal deadline to be four (4) months prior to that year's event to be placed on that year's list.

4.3.1 Manufacturers must submit motors direct to a testing laboratory, the name and address of which will be supplied, on request, by the IFMAR Electric Section Chairman. Manufacturers will be responsible to pay all laboratory fees for testing. Upon receipt of laboratory confirmation from the manufacturer to the IFMAR Electric Section Chairman that the product meets all specifications and the Chairman is satisfied that all IFMAR availability requirements have been met the product will be included on the approved products list for use at WC events.

4.3.2 An approved products list of motors approved for use in the World Championships must be included in the race acknowledgement package sent to each competitor no later than two (2) months prior to the event. Specifications: '05' sized displacements.

Can diameter to be a maximum of 36.02mm

Can length to be Maximum of 53mm measured from the mounting face of the motor to the furthest point not including solder, tabs or lead wires. Shaft diameter is .125 inch. Production Tolerances allowed. Ceramic magnets only (cobalt and rare earth magnets specifically not allowed). Current is supplied to the armature by 2 brushes.

Armature - The rotor is to have three poles with windings. Stack length without epoxy - minimum 21mm and maximum is 22.8mm. Only Copper wire is to be used for the winding.

No Split rotor is allowed. The laminations have to be one after the other without anything between. The thickness of the stack plates is 0.35mm + 0.05mm, a maximum of 63 laminations to be used. The minimum stack thickness is 3.5mm.

A minimum of 5,000 units must be available at the time of approval. A minimum of three hundred (300) motors must have been sold to at least three (3) distributors or hobby shops or OEM's at the time of submittal. The manufacturer has to provide an address of a Hobbyshop or the like, that any driver who wishes to obtain these motors at the time of approval can do so.

Approved motors may be modified by re-winding, balancing, truing of commutators, epoxying, ball bearings, brushes and custom brush systems only.

No hybrid (mixing of parts from approved motors) allowed.

4.4 DRIVERS AIDS

4.4.1 It is the objective of this rule to ensure that the 1/12th Electric and ISTC World Championship be a test of driver skill. IFMAR seeks to limit the type of driver aids to a minimum to achieve this objective. Traction control, active suspension and steering control by gyroscopes are not allowed. Sensors fitted to the car for the purpose of measuring suspension movement, wheel speed or tyre slip whilst the car is in motion are not allowed.

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- 4.4.2 Unless an electronic or mechanical driver aid is listed below in rule 4.4.3 it is not allowed for use in IFMAR 1/12th Electric and ISTC World Championships.
 - 4.4.3 The fixed single ratio transmission may not include a mechanical device/s between the drive motor output and the gearbox input for the purpose of controlling torque (eg 'slipper' clutch/fluid clutch).

A differential may include a mechanism for apportioning torque over the axle/s (eg limited slip differential). This mechanism must only be capable of setting or adjustment manually whilst the car is stationary.

A mechanical or electronic speed controller may include a mechanical or electronic device to limit the current/voltage passed from the batteries to the drive motor (eg timed delay, current limiter, keyboard programs). Setting or programming of such a device must only be possible whilst the car is stationary. Changes to the setting or program during a race are not allowed.
 - 4.4.4 Radio control receivers carried in the car may only have two devices (normally the steering servo and speed controller) connected, plus an optional separate battery supply for powering of the radio control equipment/devices. The use of any further channels to receive electrical signals from sensors carried in the car is prohibited.
 - 4.4.5 Any competitor found in contravention of the spirit or fact of rule 4.4 will be disqualified from the World Championship Meeting.

SECTION FIVE - TECHNICAL RULES 1/12

5. TECHNICAL RULES 1/12

5.1 GENERAL SPECIFICATIONS

- 5.1.1 For the purpose of the IFMAR World Championships, GTP, Le Mans Prototypes (LMP675 & LMP900), World Sports Cars (WSC) and FIA GT Racing Classes 1 & 2 (GT1 and GT2) bodies only are allowed.
- 5.1.2 When starting the race, a bodyshell must be neatly finished and complete.
- 5.1.3 Only bodyshells which are registered with IFMAR may be used.

Bodyshell manufacturers may register at any time, but not less than four months prior to that years' IFMAR World Championship to be eligible for that event.

One sample of a bodyshell, together with photographs of the full-size car on which the bodyshell is based, must be sent to the IFMAR Electric Section Chairman.

When registered by IFMAR, the bodyshell will be added to the register of bodyshells allowed for use at IFMAR World Championship events for that class.

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- The bodyshell must be a reasonable, realistic, facsimile of the full-size car on which it is based, with particular attention to realistic height, cockpit area, scoops, vents, wings and aerodynamic devices.
- 5.1.4 All open-cockpit bodyshells must have a realistic driver figure fitted in an appropriate position in the cockpit at all times when racing. The driver figure must consist of at least a driver's head/helmet, shoulders and arms and should be reasonable scale size. The driver figure must be painted in a realistic appearance, colour and garb.
- 5.1.5 All closed cockpit cars must have transparent windshields and/or side windows and/or rear windows. Open or painted windshields and/or side windows and/or rear windows are not allowed. This will be determined by reference to the photographs submitted by the manufacturer when registering the bodyshell.
- 5.1.6 WINGS
- 5.1.6a Wings may only be fitted where they are shown on the photographs submitted by the bodyshell manufacturer for registration with IFMAR. Wings may be moulded in to the bodyshell as part of the continuous material used for the bodyshell, or may be attached separately.
- 5.1.6b One separate front wing may be attached directly, and only, to the bodyshell. The front wing must be supplied by the original bodyshell manufacturer with the bodyshell as registered with IFMAR and be fitted as supplied without modification.
- 5.1.6c One rear wing only may be used with the bodyshell. The rear wing may be:
EITHER
Moulded in to the original bodyshell as part of the continuous material used for the bodyshell. This is defined as the part of the bodyshell, from the centre of the rear axle line extended rearwards, which sweeps upward from the horizontal.
OR
Attached directly to the bodyshell or chassis by separate supports. In this case the part of bodyshell from the centre of the rear axle line extending rearwards must be horizontal, or swept downward from the horizontal. Separate wings must conform to the sizes shown in 5.1.14. Side dams to the sizes shown in 5.1.14 must be attached directly to the separate wing only.
No part of the wing may be closer than 6.5 mm to any part of the body other than the tail fins or side dams.
- 5.1.7 Side dams moulded in to the original bodyshell, or supplied with the original bodyshell, registered with IFMAR, must not exceed a maximum dam length of 102 mm and maximum height of 25 mm. These dimensions include moulded-in portions of body.
- 5.1.8 Additional fences, tabs, trims, flaps, splitters or any other item fitted separately to the bodyshell, are not allowed. Only items supplied with

the original bodyshell registered with IFMAR for that years' World Championship are allowed.

- 5.1.9 The body and chassis must be securely joined at all times when the car is on the track.

If the body comes loose or falls off during a race, the car must be removed from the track until the bodyshell is securely re-attached.

- 5.1.10 Wheel arches must be cut-out if the original full-size car ran that way. This will be determined by reference to the photographs submitted by the manufacturer when registering the bodyshell with IFMAR.

- 5.1.11 The bodyshell may not be trimmed higher than the lower body trim lines. When a bodyshell is registered with IFMAR a lower trim line must be moulded in to the bodyshell, or a minimum distance from the highest point on the bodyshell to the lower trim line must be specified by the bodyshell manufacturer.

- 5.1.12 No part of the chassis, wheels, tyres, suspension or mechanical/electrical equipment may be visible outside the bodyshell when viewed in any plane.

- 5.1.13a Openings in the bodyshell (e.g. scoops, vents) must be appropriate to the full-size car on which the bodyshell is based. This will be determined by reference to the photographs submitted by the manufacturer when registering the bodyshell.

Additional openings in the bodyshell are allowed only for the original cockpit (in open cockpit cars) wing mounts, antenna, roll-over mast (if allowed) and lap recording equipment.

No other openings in the bodyshell are allowed.

- 5.1.13b Rollover antenna may be fitted. If fitted, it must have a blunt end for safety reasons, If a rollover mast and radio antenna are fitted, the antenna must be part of the mast along its length. Maximum height from ground 35 cm.

5.1.14 DIMENSIONS

- 5.1.14a Bodyshell dimensions in millimetres

	Max	Min
Overall width	172	155
Overall length	380	320
Clearance around openings	10	-
Clearance around wheel arches (except shaped wheel arches)	10	-
Rear Wing (separate)		
Width	172	-
Chord	52	-
Side Dams - Length	55	-
- Width	20	-

- 5.1.15 Bumpers are not required. If fitted, bumpers must be constructed so as to minimise injury that may result from being hit by the car. Wire bumpers shall be made of wire not less than 2.5mm or more than 4mm

in diameter. Bumpers made from sheet type material shall be not less than 2.5mm thick or more than 6.5mm thick, with all exposed edges smooth and well-rounded. Rigid blade-like bumpers made of hard, non-resilient material such as metal, brittle plastic, plywood, masonite, etc., will not be allowed. All cars may run a rear bumper, which must be behind the rear tyres. Bumpers may extend 6.5mm beyond the sides of the body, or to 172mm whichever is less.

- 5.1.16 Tyres must be black except sidewall detailing. Wheels and tyres must not be of such a material they cannot damage the surface of the track. Tyre treatments will be at the discretion of the organizers, including health and track damage considerations.
- 5.1.17 Tyres; Min. width is 13mm. Max. width is 38m. Any tyre diameter will be allowed. The tyre width is measured at the widest part of the tread or sidewall. The diameter must be maintained over at least the minimum width of the tyre. The tyre sizes apply at the start of the race.
- 5.1.18 Wheel nuts and/or axles must not protrude beyond the wheels. No more than 1.5mm of wheel outside diameter must be exposed (not covered with rubber) on the outer side of wheels.
- 5.1.19 Wheel rim diameter is 29mm Min. and 38mm Max. (This includes all non-rubber parts of the wheel and tyre.)
- 5.1.20 All cars must comply to the dimensional requirements.
- 5.1.21 Cars are not permitted to race with a reverse facility.
- 5.1.22.a The minimum weight limit, ready to run, is 865gr including transponder. The weight of the car must not be below the weight limit at any time during the race. Race distortion or damage must be disregarded.
- 5.1.22.b When racing on a track surface which can be damaged (e.g. carpet) a minimum ground clearance of 3mm must be maintained at all times. Before and after each heat, race or final, cars must pass over a 3mm block without any part of the chassis or body touching the block. Cars failing this test prior to their race will not be allowed on the track. Cars failing this test after their race will have their heat/race/final time disallowed. The organiser will state in the status report and the Stage 1 report if this rule applies to their track surface, such statement to be agreed by a two to one majority of EFRA, FEMCA & ROAR.

SECTION SIX - TECHNICAL RULES ISTC

6.0 PURPOSE

The essence of the ISTC class is competition between realistic models of saloon/sedan cars raced in Touring Car Series for Class Two FIA Touring Cars.

All Cars must comply with the ISTC Technical Rules to be eligible to race in Timed Practice, Qualifying and Finals.

6.1 APPEARANCE

- 6.1.1 Cars entered for the ISTC Event shall be scale representations of full size FIA Class Two Touring Cars currently racing in International Touring Car Series' (eg ITC, BTCC, NATC, Japan Touring Cars, etc.) held from time to time. Notwithstanding this broad definition, all Cars must use a four-door bodyshell to be eligible for this Event.
- 6.1.2 A register of bodyshells will be maintained by IFMAR Electric Section. Only bodyshells registered four months prior to that years' Event will be eligible for use on Cars.
- 6.1.3 Cars shall be neatly finished.
All details of front and rear lights, air intakes and windows must be clearly contrasted from surrounding paintwork.
- 6.1.4 Any decals may be carried on the car and wing.

6.2 CHASSIS AND DRIVE TRAIN

- 6.2.1 Two wheel drive to front or rear wheels or four wheel drive is allowed.
- 6.2.2 Chassis must have independent suspension to all four wheels. Each driven wheel must have a flexible joint (eg dogbone/s or universal joint/s) in its driveshaft. Drive train and suspension design is free from restriction. 'Flat pan' (1/12th and 1/10th Track style) chassis are not allowed.
- 6.2.3 No part of the chassis, including wheels/tyres/axles, may protrude outside the bodyshell when viewed from above. No part of the motor, batteries or electronic equipment may protrude outside the bodyshell when viewed in any plane. Rollover masts may not be fitted.
- 6.2.4 Materials used in the chassis and drive train are not restricted, although the use of special metal alloys (titanium/magnesium/etc.) in parts is discouraged, to reduce costs.
- 6.2.5 The chassis must not be shaped to gain an aerodynamic advantage. In principle, the underside of the chassis must be flat and parallel to the ground along the entire length of the bodyshell. Aerodynamic shaped parts (splitters/diffusers/tunnels/etc.) may not be fitted to the chassis.
- 6.2.6 Wheel nuts/axles must not extend more than 2mm beyond the wheels when viewed from above.
- 6.2.7 Only one Car per driver per class is allowed.
- 6.2.8 The use of one-way bearings in the rear axle is not allowed. The cars must be able to have a braking effect on the rear wheels from the electronic speed controller.

6.3 DIMENSIONS

	Min. (mm)	Max.(mm)
Wheelbase	250	270
Width (without bodyshell)	170	190
Width (with bodyshell)	175	195
Length (overall, with bodyshell fitted)	360	460
Height (to top of roof - ready to race)	115	175

* Ground clearance (ready to race)	5	-
Wing width (including endplates and supports)	125	190
Wing chord (including any flaps or extensions)	20	40
Wing endplate (when separate)	-	40 x 20
Flap or gurney tab extension above plane of wing	-	3
Wheel diameter (excluding tyre bead)	47	50
Wheel width (including tyre bead)	24	26
Tyre width (across sidewalls when fitted to wheel)	24	28
Tyre diameter (when mounted on wheels)	63	67

* Ground clearance - for use on carpet and other surfaces which could be damaged.

6.4 WEIGHT

- 6.4.1 Weight, ready to race excluding timing equipment, at all times during the race:
 4WD - 1500 grams minimum .
 2WD - 1400 grams minimum.

6.5 WINGS

- 6.5.1 Only one wing allowed, fitted in the same place as the wing on the original car. The wing may overhang the rear of the body of the car by 10 mm.
- 6.5.2 The height of the wing may be adjusted, but the wing including endplates must not extend higher than the roofline.
- 6.5.3 Front splitters/spoilers must be moulded in to the bodyshell in the same position as the original car.
- 6.5.4 One tab or gurney flap only allowed which must be fitted securely to the rear wing, and must be contained within the wing dimensions, and the maximum height of 115mm.
- 6.5.5 Wings/splitters/spoilers/tabs/gurney flaps must be fixed rigidly to the body and/or wing, and may not be moved whilst the car is in motion.

6.6 TYRES

- 6.6.1 A controlled tyre and a selection of one of two different densities of inserts must be used.
 The manufacturer who was selected to supply the tyre and/or the two (2) inserts for the previous IFMAR ISTC World Championship event is not eligible to supply tyres and/or the two (2) inserts for the next IFMAR ISTC World Championship event.
- 6.6.2 The type of tyre and two (2) inserts are decided by the IFMAR Electric Executive together with the race organiser (race organiser recommends three (3) types of tyres and six (6) types of inserts in order of preference). The race organiser has to forward the recommendations to the IFMAR Electric Section Chairman eight (8) months before the event. The final decision will be made six (6) months before the event by a majority vote of the IFMAR Electric Executive.

The three (3) recommended types of tyres and six (6) recommended types of inserts must be commercially available in the four (4) Blocs at the time of the organiser's recommendations, (eight (8) months prior to the events) and remain available up until the final decision six (6) months prior to the events. The selected controlled tyre and controlled inserts must continue to be commercially available in the four (4) Blocs from six (6) months prior to the event up until the commencement of the events.

6.6.3 Moulded rubber tyres only allowed, no sponge or closed-cell foam tyres allowed. No modifications or additions can be made to the controlled inserts, e.g. glueing the insert into the tyre.

Tyre material must not damage the racing surface.

Tyres must be black except for sidewall detail.

Tyres must have a IFMAR marking on both sides.

Foam inserts may be fitted inside the tyre.

Pneumatic tyres are NOT allowed.

Any driver using any other type of tyre will immediately be disqualified from the event and from all future IFMAR World Championship events.

6.6.4 Tyres are restricted in use during the Event:

Open Practice - four sets of four tyres only (no marking required)

Timed Practice - one set of four tyres only

Qualifying - three sets of four tyres only

Finals - two sets of four tyres only (three sets for the World Championship Final)

Drivers must have their wheels and tyres marked by Technical Inspection. This marking may take place at any time.

Wheels/tyres must be marked by the Technical Inspector before being presented to Technical Inspection for timed practice heats, qualifying heats or finals.

Unmarked wheels/tyres may not be used on the car during qualifying heats and finals.

Technical Inspection shall be responsible for recording the number of tyres used by each driver.

6.7 BODYSHELLS

6.7.1 Bodyshells must be a scale replica of the original car used in the relevant FIA or National class. The original car must be a four-door type. Replicas of two-door original cars are not allowed.

6.7.2 Bodyshells may not be cut above the lower door line nor above the rear bumper line. When a bodyshell is registered with IFMAR a lower trim line must be moulded in to the bodyshell, or a minimum distance from the highest point on the bodyshell to the lower trim line must be specified by the bodyshell manufacturer.

6.7.3 Bodyshells must be securely fixed to the chassis at all times during a race.

6.7.4 Only one cutout, maximum 10mm diameter, may be made in the body except for clearance for the wheels (wheel arches), body mounting holes and lap timing equipment.

-
- 6.7.5 All wheel arches must be cut out as on the original car. No more than 10mm clearance between the wheels and the wheel arches is allowed.
 - 6.7.6 Cars shall be neatly finished. Details of all front and rear lights, air intakes, front grills and windows must be clearly contrasted from the surrounding paintwork.
 - 6.7.7 All windows must be clear or translucent grey/black. Windows may not be cut out. However the driver may have his name on the side window.
 - 6.7.8 Only bodyshells which are registered with IFMAR may be used.
 - 6.7.9 One sample of a bodyshell, together with photographs of the full-size car (showing at least 3 views: front, side and rear) on which the bodyshell is based, must be sent to the IFMAR Electric Section Chairman five months prior to the event together with a homologation fee of US\$ 200,- When registered by IFMAR, the bodyshell will be added to the register of bodyshells allowed for use at IFMAR ISTC World Championship events and the applicant will be notified.
 - 6.7.10 The bodyshell must be a realistic scale facsimile of the full-size car on which it is based, with all features in proper proportion to each other. Lines indicating the shut-lines on the full-size car for bonnet (hood), boot (trunk) all doors and windows are to be moulded in to the bodyshell. Particular attention must be paid to realistic scale height, width, length, cabin area, scoops, vents, wings and aerodynamic devices. The decision of IFMAR to register the bodyshell will be final.

6.8 NUMBERS

- 6.8.1 Cars will carry three numbers. One number on each side, one number on the bonnet/hood or roof. Numbers must be at least 35 mm high, with a minimum stroke of 5 mm. Number decals may not be trimmed to eliminate the background.

6.9 BUMPERS

- 6.9.1 Foam bumpers may be fitted. No part of the bumper may extend outside the bodyshell when viewed from any direction, nor be lower than the chassis.

6.10 SPEED CONTROLLER

- 6.10.1 Mechanical or Electronic Speed Controllers are allowed. Reverse facility in speed controllers is not allowed.
Speed controllers may only have timed delay, current limiters and keyboard programs. These programs must only be capable of adjustment whilst the car is stationary.

INTERNATIONAL FEDERATION OF MODEL AUTO RACING



APPENDIX APPROVED PRODUCTS LIST (ELECTRIC RULES)

Last Amended: 3rd of September 2004

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BATTERIES

Battery Type	Cell Weight Min/Max gms	Cell Diameter Min/Max mm	Cell Height Min/Max mm
Sanyo N1700SCRC	55 g/57 g inc. shrink wrap	22.3 mm/22.5 mm	41.5 mm/41.7 mm
Panasonic P170	49 g/ 51g inc. shrink wrap	N/A	N/A
Sanyo N-SCRC	55 g/ 58 g inc shrink wrap	22.0 mm/23.0 mm (21.7 mm/22.3 mm*)	41.0 mm/43.0 mm (41.7 mm/42.3 mm*)
Panasonic P-170SCR	49 g/52 g inc shrink wrap	22.0 mm/23.0 mm	41.0 mm/43.0 mm
Hit-Corporation - Powers Max (Panasonic P-170 SCR-Z)	50 g/53 g inc. Shrink wrap	22.0 mm/23.0 mm	41.0 mm/43.0 mm
Panasonic P170SCR SP	48 g/53 g inc shrink wrap	22.0 mm/23.0 mm	41.0 mm/43.0 mm
Panasonic P180SCRZ EX	48 g/53 g inc shrink wrap	22.0 mm/23.0 mm	41.0 mm/43.0 mm
Sanyo RC 2000	56 g/60 g inc shrink wrap	22.0 mm/23.0 mm	41.0 mm/43.0 mm
Hit-Corporation Power P-Max (Panasonic P-190 SCRZA01)	50 g/53 g inc. Shrink wrap	22.0 mm/23.0 mm	41.0 mm/43.0 mm
GM 2000 High Power (Sanyo N-1900SCR)	54 g/58 g w/o shrink wrap	22.0 mm/23.0 mm	41.0 mm/43.0 mm

* = no shrink

** = Sanyo RC 2000 Shrink Wrap Styles approved: Silver/Grey, English Text; Silver/Brown, English Text; White/Green, Japanese Text; White/Green, English Text, Recycle Symbol, White/Green, English Text, No Recycle Symbol.

All above approved shrink wrap samples available for inspection at IFMAR WC's

Nominal Voltage	Nominal Ah Rating	Weight of pack of 6 cells, inc. 12 g for connections	Shrink wrap description and cell markings	First approved by IFMAR
1.2 V	1.7 Ah	342 g min/354 g max	Black - see detail on cell	1994
1.2 V	1.7 Ah	306 g min/318 g max	Purple Shrink Wrap	1994
1.2 V	1.7 Ah	342 g min/360 g max	Black - see detail on cell	1995
1.2 V	1.7 Ah	306 g min/324 g max	Yellow Shrink Wrap	1995
1.2 V	1.7 Ah	312 g min/330 g max	Blue/Green Shrink Wrap "P-170SCR" marked on cell	1996
1.2 V	1.7 Ah	300 g min/330 g max	Yellow/Black Shrink Wrap "SP" marked on cell in red	1996
1.2 V	1.8 Ah	300 g min/330 g max	Orange Shring Wrap "EX" marked on cell in yellow	1996
1.2 V	1.9 Ah	348 g min/372 g max	See note ** below	1997
1.2 V	1.9 Ah	312 g min/330 g max	Purple Shrink Wrap "2000 RD 1.2V P-MAX" marked on cell	1998
1.2 V	2.0 Ah	336 g min/360 g max	Black Shrink Wrap "GM" High Power" marked on cell	1998

Battery Codes allowed for the 2003 IFMAR Electric World Championships:

Sanyo IG
Panasonic 7/04

Codes after these dates (July 2004) are not allowed.

The following batteries are also allowed but must be presented to technical inspection for verification and clearance priors to use:

BERAC/EVER READY, GE/GATES HP601 1.2AH, PANASONIC 1700SCR-P170, SAFT 1.2AH, VARTA 1.2AH, YUASA 1800MAH

BATTERIES

Battery Type	Cell Weight Min/Max gms	Cell Diameter Min/Max mm	Cell Height Min/Max mm
Panasonic 3000 NiMH (HHR300SCP)	55 g/60 g w/o shrink wrap	22.0 mm/23.0 mm	41.5 mm/43.0 mm
Sanyo RC 2400	56 g/65 g inc shrink wrap	22.0 mm/23.0 mm	41.0 mm/43.0 mm*
Sanyo RC 3000 H	57 g/63 g inc shrink wrap	22.0 mm/23.0 mm	41.0 mm/43.0 mm*
Hit-Corporation Powers Max 3000 (Panasonic 3000 NiMH/HHR300SCP)	55 g/60 g w/o shrink wrap	22.0 mm/23.0 mm	41.5 mm/43.0 mm
Hit-Corporation Powers GT- 3000R (Gold Peak HO300SCH)	58 g/65 g inc shrink wrap	22.0 mm/23.0 mm	41.1 mm/42.6 mm
Panasonic 3000 Stock NiMH (HHR300SCZ)	56 g/59 g inc shrink wrap	22.0 mm/23.0 mm	41.0 mm/43.0 mm
Sanyo RC3000HV	57 g/63 g inc shrink wrap	22.0 mm/23.0 mm	41.0 mm/43.0 mm*
Sanyo RC-3300HV	57 g/63 g inc shrink wrap	22.0 mm/23.0 mm	41.5 mm/43.0 mm*
Yokomo Z3300HVR (GP 330 SCH)	60.5 g/63 g inc shrink wrap	22.0 mm/23.0 mm	41.0 mm/43.5 mm*
GP 330 SCHR	60.5 g/63 g inc shrink wrap	22.0 mm/23.0 mm	41.5 mm/43.0 mm*

* = no shrink

*** = Sanyo RC 2400 Shrink Wrap Styles approved: White/Yellow/Red, English Text, US Recycle Symbol; White/Yellow/Red, English Text, European Recycle Symbol; White/Yellow/Red, Japanese Text
All above approved shrink wrap samples available for inspection at IFMAR WC's

Nominal Voltage	Nominal Ah Rating	Weight of pack of 6 cells, inc. 12 g for connections	Shrink wrap description and cell markings	First approved by IFMAR
1.2 V	3.0 Ah	342 g min/372 g max	Green Shrink Wrap Panasonic 3000 NiMH	2000
1.2 V	2.4 Ah	348 g min/402 g max	See note *** below	2000
1.2 V	3.0 Ah	354 g min/390 g max	White/Yellow/Green/ Blue Shrink Wrap Sanyo 3000 NiMH	2000
1.2 V	3.0 Ah	342 g min/372 g max	Red Shrink Wrap Powers Max 3000	2000
1.2 V	3.0 Ah	360 g min/402 g max	Blue Shrink Wrap Powers GT 3000R	2001
1.2 V	3.0 Ah	348 g min/366 g max	Grey Shrink Wrap Panasonic 3000 NiMH Stock Metal Hydride	2001
1.2 V	3.0 Ah	354 g min/390 g max	Green/Yellow Shrink Wrap Sanyo 3000 NiMH	2002
1.2 V	3.3 Ah	354 g min/390 g max	Black Shrink Wrap Sanyo 3300 Ni-MH	2003
1.2 V	3.4 Ah	375 g min/390 g max	Metallic Blue Shrink Wrap Yokomo 3300 ZAP-2	2003
1.2 V	3.3 Ah	375 g min/390 g max	Magenta/Red/Green or Yellow/Green Shrink Wrap GP NiMH 3300	2003

Battery Codes allowed for the 2004 IFMAR Electric World Championships:

Sanyo IG (No code for the RC3000H/HV and RC3300HV)
Panasonic 7/04 (No code for the 3000 NiMH and 3000 Stock NiMH)

Powers GT-3000R 4G (Code on the cell, below the shrink wrap)

GP No Code for GP330SCHR and Yokomo Z3300HVR

Codes after these dates (July 2004) are not allowed.

BATTERIES

Battery Type	Cell Weight Min/Max gms	Cell Diameter Min/Max mm	Cell Height Min/Max mm
Epic Monster Metal 3300 Plus	60.5 g/63 g inc shrink wrap	22.0 mm/23.0 mm	41.5 mm/43.0 mm

* = no shrink

Battery Codes allowed for the 2004 IFMAR Electric World Championships:

Epic No Code for Monster Metal 3000 Plus

Codes after these dates (July 2004) are not allowed.

Nominal Voltage	Nominal Ah Rating	Weight of pack of 6 cells, inc. 12 g for connections	Shrink wrap description and cell markings	First approved by IFMAR
1.2 V	3.3 Ah	375 g min/390 g max	Black/White/Red/Green Shrink Epic Monster Metal GP Batteries	2004

MOTORS (1999+)

Corally:

CORALLY DYNAMIC FLOW (1999)

GM-Racing/Graupner:

GM RACING COSMIC 3 A, 2 types of cases, one without cooling holes (1999/2000)

GM RACING COSMIC 3 B (1999)

GM RACING COSMIC 3 B thick armature (1999)

GM RACING COSMIC (2003, new magnets, thin and thick armature)

Kyosho:

KYOSHO XSPEED (2000)

Orion:

TEAM ORION MODIFIED TOP, 2 different endbells, 2 different color combinations (1999/2000), new case (2003)

TEAM ORION TOP V2, 4 types of armatures (2003), changed endbell (2004); one more Armature (2004)

Ova:

OVA MODIFIED (2000)

Powers International:

ECHO MDX HANDWOUND (2000)

ECHO MDX 3000 (2000)

ECHO MDX SPORT (2000)

ECHO MDX PATTERN (2000)

ECHO MDX TOURING SPECIAL (2000)

Reedy:

Ti Worlds 4 mm, 2 armatures (2004)

Ti Worlds 5 mm, 2 armatures (2004)

ALuminium endbell für Ti, PT, KR and Fury (2004)

Trinity:

TRINITY D4 SERIES, 2 types of armatures (all 2000)

TRINITY D5 SERIES TM85-1 and TM85-2, 2 types of armatures (all 2000)

TRINITY P-94 SERIES TM-87A and TM-87B, 3 types of armatures (all 2002)

TRINITY D5, 4 types of armatures (2003), another armature (2004)

TRINITY EPIC BINARY, 4 types of armatures (2003)

TRINITY D6 TB-05B. 4 types of armature (2004)

Yokomo/Reedy

YOKOMO/REEDY FURY, 2 types of armatures (1999/2000)

YOKOMO/REEDY MOD Ti, 2 types of armatures (2001)

YOKOMO ZERO 2nd Type 1 (2001)

YOKOMO ZERO 2nd Type 2 (2001)

YOKOMO ZERO 2nd Type 3 (2001)

YOKOMO ZERO 3rd Type 2 (2001)

YOKOMO ZERO 3rd Type 3 (2001)

REEDY KR, 2 types of armatures, 4 and 5 mm (2003)

REEDY PT, 2 types of armatures, 4 and 5 mm (2003)

YOKOMO Zero Type 4 (2004)

YOKOMO Zero Type 5 (2004)

YOKOMO Zero Type 6 (2004)

INTERNATIONAL FEDERATION OF MODEL AUTO RACING



REGISTERED BODIES ELECTRIC TRACK

Last Amended: 7th of August 2004

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1/12 Electric Track

Andys

Jaguar
Nissan RK90
Sauber Mercedes
Toyota

Trinity

Bentley EXP Le Mans

Associated

Conquest BT1
Nissan

Bolink

Nissan NPT90
Nissan ZX
Ferrari WSC
Jaguar XJR14
Arundel C200
Porsche 962

Calandra

Courage Peugeot C60 Evo3

Buds

Nissan NPT90
Jaguar XJR14

Hot Bodies

Ferrari WSC
Diablo GTP
Nissan GTP (2000, #12201)
Toyota GT-1 (2000, #12203)

Parma /PSE

Tiga
Nissan NPT90
BMW GTP
Porsche GTP

Protoform

Courage C-41 WSC
Nissan P-35

ISTC 1/10

Andys/Trinity

Dodge Stratus (2000, #3300;
2002, Trinity REF 1002)
Honda BTCC Accord (2000,
#3315; 2002 Trinity REF
1003)

Chemic Ride

Honda Accord (2004, #195)
Dodge Stratus MK-I, MK-II,
MKIII (2004, #190, #191,
#193)

Chevron Models

Alfa Romeo 156 (2000,
#ZTC005)

Hot Bodies

Dodge Stratus (2000,
#10715)

HPI Racing

Alfa Romeo 156 (2000,
#7411)
BMW 3-series (2000, #7302)
Dodge Stratus (2000, #7316
and #7344, 2004, #7348)

Kyosho

Toyota Altezza/Lexus IS 200
(2000, #39965)

Pro-Line/Protoform

Alfa Romeo 156 (2000,
#1419-00)
Dodge Stratus (2000, #1427-
00)
Vauxhall(Opel Vectra (2000,
#1429-00)

Team Losi

Skoda (2004, #Losa 8056)
Alfa 156^(2004, #Losa 8053)

Tamiya

Subaru Legacy (2004, #3727)

Yokomo

Dodge Stratus (2000, #ZR-
ASB and #ZR-ASB-B, 2002
#ZR-YCBC, 2004 #ZR-YBSE
and ZR-YBSD)
Toyota Altezza (2000,
#ZR-TAB)
Honda Accord (2004, #ZS-
26)

