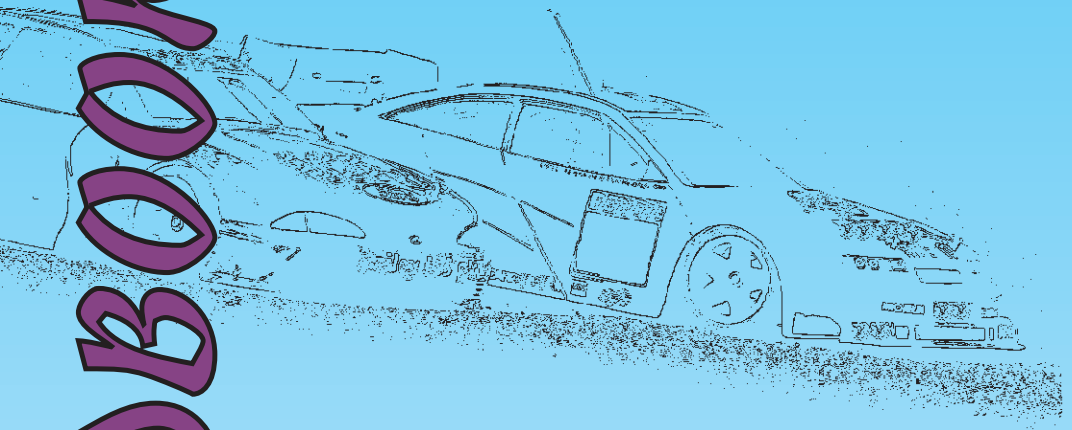


HANDBOOK 2007



*European Federation of
Radio-Operated
Model Automobiles*



EFRA race calendar 2007

Week	Month/Date	1:3 IC Track	1:3 IC Buggy	Large Scale	1:10 IC Track	Electric Buggy	Electric Track
10	March 06-11						
11	March 17-18	Ele World's Challenge					GP12/10 Samsborg / Norway
12	March 24-25		Belgium				
13	March 31/April 1						EC 11/2 Eskilstuna / Sweden
14	April 7-8					GP Madrid Spain	
15	April 14-15			GP 1:5 TC/F1 Bologna / Italy			
16	April 21-22			GP 1:5 TC/F1 Zagreb / Croatia			
17	April 28-29	GP Losailo - Switzerland		Wamanda Brisbane			
18	May 5-6				Roselaar/Belgium		
19	May 12-13		GP France/Vaux				
20	May 19-20			IR L.S Buggy/St Expeyrie / France			
21	May 19-20			GP 1:5 TC/F1 Kirchberg / Austria			IR MONTBRISON / France
20	May 19-20						
21	May 26-27	EC-B Tahim/Slovenia					
22	June 2-3						
23	June 8-10		EC-B Sand / Germany	GP 1:5 TC/F1 Leipzig/Germany		GP LISBOA / Portugal	
24	June 16-17						
25	June 23-24		GP France				
26	June 30/July 1						
26	June 30/July 1			GP 1:5 TC/F1 Losailo/Switzerland			
27	July 7-8				GP France / Annulus		
28	July 14-15			EC A Alvarez / France			
28	July 21-22						
29	July 21-22			EC 4-5 TG Riechers/Asstrie			
30	July 28-29	EC A Losailo - Switzerland				EC elec buggy/Frankfurt, Finland	
31	August 4-5						EC 110 Montbrison / France
32	August 11-12			GP 1:5 TC/F1 Brooklands/England			
33	August 18-19		GP Norway, Skien				
33	August 18-19				EC A 500mm Madrid / Spain		
34	August 25-26	EC A9s Germany			EC A9s Germany		GP Antche France
35	September 1-2			IR L.S Buggy /Nottlham/England			
36	September 8-9		GP Italy, Montsummano				
17/09							
37	September 15-16	GP Italy					
38	September 20-30						
38	September 22-23			IFMAR W/C 1/5 IC Circuit Brisbane/ Australia		IFMAR/W/C Elec off road 2/4wd. Ishikawa, Japan	
39	September 29-30						
40	October 04-14	IFMAR W/C 1/8 IC Circuit Corridal/Argentina					
40	October 6-7						
41	October 13-14						
42	October 20-21						

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ELEC. TRACK	Charis Constantinou	20 Salaminos Kaimakli Nicosia
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1:8 IC TRACK All contact through federation secretary

1:8 IC BUGGY All contact through federation secretary

1:10 IC TRACK All contact through federation secretary

ELEC. TRACK All contact through federation secretary

1:10 BUGGY All contact through federation secretary

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TREASURER See President

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1:8 IC TRACK See Secretary

1:8 IC BUGGY See Secretary

1:10 IC TRACK See Secretary

ELEC. TRACK See Secretary

1:10 BUGGY See Secretary

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GREECE

MODELLING UNION OF GREECE M.U.G.

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NEDERLANDSE ORGANISATIE MODEL AUTO CLUBS NOMAC

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RUSSIA

**AUTOMODELL FEDERATION OF RUSSIA
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SLOVENIA

**ZVEZA AVTOMODELARSKIH DRUSTEV IN KLUBOV SLOVENIJE =
FEDERATION OF MODEL CAR CLUBS OF SLOVENIA
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ASOCIACION ESPAÑOLA DE COCHES A RADIOCONTROL AECAR

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SWITZERLAND

SWISS RADIO CONTROL CAR CLUBS ASSOCIATION S.R.C.C.A.

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TURKEY

Model Car Sport Association Turkey

EFRA REF:1

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EFRA Referee List

	1-4TR	1-5TR	1-8TR	1-8B	1-10C	1-10EB	El. TR.		1-4TR	1-5TR	1-8TR	1-8B	1-10C	1-10EB	El. TR.
AUSTRIA															
Paul Srna Liechtensteinstraße 45/3 A-1090 Wien Austria Tel: +43 1 317 80 26 Fax: +43 1 317 80 26 pauli@rc-web.at	2004				A	A	A								
Wolfgang Stumpf Franz-Josefsring 16 A-2500 Baden Austria +43 / 2252 / 488 66 large.scale@erfa.se	2002	A	A												
BELGIUM															
Frank Mostrey Tenierslaan 28 B 1910 Kampenhout Belgium Tel: +32 16 65 75 18 Fax: +32 16 65 75 18	2002		B		B	A	A								
Franky Noens Pastoor Coplaan 51 2070 Zwijndrecht Belgium Tel: +32 3 252 47 34 Fax: +32 3 825 52 72	2003	A	A	A		A									
CROATIA															
Zvonimir Maticic III Pile 35 10 000 Zagreb Croatia Tel: +385 1 38 37 444 Fax: +385 1 38 39 073	2002	B	B	B											
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DENMARK															
Jan Juul Kildevej 9 7430 Ikast Denmark Tel: +45 97 15 68 99 Fax: +45 97 25 12 50	2003	C	B	B	B	B	B								
John Nielsen Praestoe Landevej 5 4700 Naestved Denmark Tel: +45 55 73 82 92 Fax: +45 55 73 75 31	2003	B	B	B	B	B	B								
FINLAND															
Jussi Luopajarvi Ilveskentie 1A 65350 VAASA Finland +358 40 759 5542 Jussi.luopajarvi@vaasanua.net	2007											C		C	C
Kalle Lehto Urpesentie 24 FIN-45700 Kuusankoski Finland +385 40 728 6533 kalle.lehto@gmail.com	2007	C	C	C	C	C	B	B							
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Ilkka Mannio Louhelantie 1 M 186 FIN-01600 Vantaa FINLAND +358 40 522 4686 i.mannio@suomi24.fi	2003	C	C	B	B	A	A	A	C						
FRANCE															
Julien Alter Les Nymphéas 2 Place Galilée F 67380 Lingolsheim France Tel: +33 03 88 78 80 05 julien.alter@free.fr	2002			A	A	A									
Philippe Asselin 253 rue de Barbizon F-77350 LE MEE sur SEINE France Tel: +33 (0)623 141 847 Fax: +33 (0)169 112 173 eredis.idf@cegetel.net	2002		A	A	A	A									
Philippe Bertrand 27 Rue De La Céramique F 57100 Thionville France Tel: +33 3 82 34 96 59 Fax: +33 3 82 34 11 28 piste8th@fvrc.asso.fr	2002		A	A	A	A									
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	1:4TR	1:5TR	1:8TR	1:8B	1:10IC	1:10EB	El. TR.		1:4TR	1:5TR	1:8TR	1:8B	1:10IC	1:10EB	El. TR.
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VIALLA Michel 6 rue des Pr2s Fleuris F-42600 MONTBRISON FRANCE +33(0) 477 961 291 +33(0) 477 961 291 piste10el@fvrc.asso.fr	2007						C	Thomas Eisenreich Forster Straße 119 a 82380 Peissenberg Germany + 49 8803 61 53 09 + 49 8803 61 53 19 t.eisi@gmx.net	2007			B			
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Bernd Kempnter Karl-Marx Str 36 D-681 99 Mannheim Germany Tel: +49 621 788 76 26 Fax: +49 621 788 99 23 Bernd.Kempnter@t-online.de	2002			B	C	C	A	 GREAT BRITAIN CHARLIE FRASER 37 Station Road, Tydd Gote, Wisbech, Cambridgeshire. PE13 5QA. UK + 44 1945 420131 sheila_charlie@bigfoot.com	2007						C

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2. CONSTITUTION OF THE EUROPEAN FEDERATION OF RADIO OPERATED MODEL AUTOMOBILES EFRA

1. Name

The name of the Federation is the European Federation of Radio Operated Model Automobiles (hereinafter referred to by the acronym EFRA)

2. Objectives

The objectives of the Federation are:

- a) The promotion of international Friendship and Co-operation, particularly (but not exclusively) on the continent of Europe, through and for the construction, competition and sport of radio-operated model automobiles.
- b) The establishment of uniform International rules and regulations for such construction and operation.
- c) The co-ordination of races and competitions, national and international and the keeping of records thereof and the distribution of information relating thereto.
- d) The representation of its member countries in the world federation IFMAR(International Federation of Model Auto Racing) which coordinates model car racing in the world and organises World Championship races. EFRA is recognised by IFMAR as its representative for Europe and it's affiliate members. EFRA in turn recognises and supports the authority of IFMAR in all matters relating to the worldwide organisation of model car racing.

3. Membership

- a. Membership of EFRA shall be open to the governing body of Radio Controlled Car Racing in each country in Europe and those countries considered by the Executive Board to be acceptable in terms of proximity to Europe. Affiliated membership available to any other country in the world for purposes of representation in IFMAR affairs.

Any application for membership must contain such information as the executive board of the Federation may from time to time require and shall be accompanied by the then current annual membership fee.

All membership applications shall be placed for acceptance before the next following General Meeting of EFRA. All membership applications, whether paid or not, shall be deemed as provisional until formally accepted by the General Meeting. Such acceptance shall require a simple majority of votes.

Pending such acceptance however a provisional member shall be entitled to be represented at all EFRA sponsored events other than the European Championships.

Any question that may arise as to whether the Applicant is in fact the governing body of the country it wishes to represent, or whether such country is in fact a country for the purpose of these rules, (as distinct as a province, country etc.) shall be decided at the General Meeting of EFRA by a simple majority. A General Meeting may by a two thirds majority of the membership cancel the membership of any member.

At least three months notice of any proposal to review a membership shall be given to all members and the executive shall, if so requested, transmit to all members any defence or explanation which the member in question wishes to put forward.

- b. Affiliate membership of EFRA entitles the right to attend and make AGM proposals but does not include voting rights. The Affiliate Membership fee is a full membership fee but without additional section fees.

Affiliate members have no automatic right to European Championship allocations but if places are available they can be offered to such member countries. Affiliate members cannot apply for European Championship events, but may apply for EFRA Grand Prix.

Affiliate members have no automatic right for IFMAR WC allocations but if places are available they can be offered to such member countries.

Affiliate members may apply through EFRA to host IFMAR World Championship.

4. **Annual Meeting (AGM)**

The Federation shall hold an Annual General Meeting in the month of November. A Special General Meeting shall be called if either the Executive Board of EFRA so resolves or a request in writing therefore, signed by the Representatives of at least 1/3 of the member countries, is received.

Notice of every General Meeting shall be given at least one month beforehand with general particulars of the business to be conducted, and details of any proposed alterations to this constitution or to the racing or constructions rules and regulations. The Business at an Annual General Meeting shall be:

- a) The election of Officers whose terms of office have expired, proposals for official posts must be lodged with the General Secretary at least 45 days before the General Meeting. The Officers will form an Executive Board as follows:

Executive Board

1. The President
2. General Secretary
3. Section Chairmen
4. Treasurer
5. IFMAR Liaison Officer
6. PR Officer

The functions of General Secretary and Treasurer may be combined. To carry out the task for Public Relationships a Sub Committee working group will be established.

All candidates for office properly proposed under the provisions of this constitution shall be introduced to the General Meeting prior to the Section conferences. The meeting shall be given the opportunity to question candidates for election.

Each section shall also elect a Vice Chairman who shall deputise in the event of the Chairmans absence.

One officer will be elected every two years to act as liaison between EFRA and IFMAR to maintain continuity of policy. The post of IFMAR liaison officer may be combined or separate from other post.

The above officers shall form an Executive board charged with the well running of EFRA and responsible for any decision making that is necessary between General Meetings.

- b) Election of President will take place at the Annual General Meeting each year. General Secretary, Treasurer and Section Chairmen shall hold office for 2 years and be elected at the Annual General Meeting.
- c) To decide the date and venue of future European Championships and World Championships, the Meeting may (but is not bound to) fix such dates and venues for up to three years ahead from applications made in writing to the Executive not less than six weeks before such meeting. Particulars of any such applications shall be included in the notice covering the meeting and the selection of the venue will be decided in the Section Meeting and approved by the AGM. The voting system to select the venue is as follows:

Each member country has one voting form with 3 choices. All 3 must be used.

1st choice will receive 4 points.

2nd choice will receive 2 points.

3rd choice will receive 1 point.

The two sites receiving the highest total number of points will go forward to a second ballot where a simple majority will decide the chosen site.

In the event of a tie, the President may use his casting vote.

All balloting will be secret, but results will be published.

- d) To decide the dates and venues of other EFRA-approved events during the following year, including the next Annual General Meeting.
- e) To consider any matter or proposal which the Executive Board wishes to bring before the Meeting, particulars of which shall be included in the notice of the Meeting.
- f) To consider any matter or proposal of which a member country has given notice in writing up to the 31st of August. Particulars of such shall be included with the notice of the General Meeting as required by Section 4 above.

The Executive Committee will examine all proposals received for discussion at the Annual General Meeting and where necessary prepare them for presentation by eliminating duplication and contradiction. Where proposals concerning Section matters that have a broader effect on General Rules or Constitution matters are received, the Executive Committee will endeavour to resolve conflicts and present appropriate proposals to the General Meeting.

The catalogue of proposals recognised to be presented at the upcoming AGM should be sent to all EFRA member country representatives / secretaries at least 4 weeks before the meeting.

Proposals from EFRA National Federations for IFMAR Constitutional and Racing Rule changes must firstly be submitted to the EFRA Annual General Meeting and shall be subject to the same rules and procedures as those in force for EFRA matters

This procedure does not remove the absolute right of any Member country to make proposals directly to the General Meeting, so these direct proposals will be recorded on the minutes and will be voted in the next General Meeting.

- g) To deal with any matter which, under this Constitution Rules fail to be dealt with by a General Meeting.

5. Voting

- a) Following any proposal at a General Meeting each member country shall have one vote which shall be exercisable by a person duly authorised in writing by his governing body in such country.
- b) Each country shall also be entitled to one vote at the section conference exercisable by a person duly authorised as provided for above.
- c) No proxy votes shall be allowed.
- d) Section conferences shall form part of the AGM. Voting procedures for the Section Conferences shall be as for the AGM. Decisions of the Section Conferences relating to the Technical Rules or Financial affairs of general concern to EFRA shall be ratified by the AGM.
- e) Any amendment to the Constitution or to the Racing or Construction Rules of the Federation shall require a two-thirds majority of the Annual General Meeting.

Other proposals unless otherwise specified herein, shall require a simple majority only. The President shall, in the event of a tie, have a casting vote.

A RESOLUTION IN WRITING, SIGNED BY THE AUTHORISED REPRESENTATIVES OF ALL MEMBERS, SHALL HAVE THE SAME EFFECT AS IF IT HAD BEEN DULY PASSED AT A GENERAL MEETING.

- f) In case that more than 1/3 of the Member federations of the effected section or the Executive Committee feel it's necessary, a postal vote can be done. In the event that there is a need to request a postal vote from all Member Federations, then a time limit of 30 (thirty) days shall be set for the return of the required voting form.
The decision made by postal vote shall be effective 30 (thirty) days after it has been published to all Member Federations .
Postal votes should only be used in the case of unforeseen coincidence and should not apply to decision taken at the last AGM
- g) Before a voting process will be started, the total number of votes being present will be recorded. The voting result will be published to the auditorium and recorded in the minutes. Number of votes in favour and number of votes against without mentioning the number of abstentions.

6. Honorary Officers

- a) EFRA may if it so wishes elect a Honorary Life President and Honorary Life Vice President to the Federation on proposal from the Executive Committee. Such persons shall be granted these Honorary titles in recognition of exceptional service to EFRA or Model Car Racing in general. There shall be only 1 Honorary Life President but there may be as many Life Vice Presidents as the Federation wishes. Election shall be by vote at the Federation AGM following proposal in accordance with the provisions of this Constitution.
- b) Such Honorary Officers are elected to view the activities of EFRA in the light of their particular experience and provide help, advice and guidance should it be needed. They shall have the power to ask the Executive Committee to call an Extraordinary General Meeting should circumstances arise that threaten the well being of EFRA.
- c) Honorary President and Vice Presidents shall have automatic right to speak at any EFRA Committee meeting or conference but may not have a vote.
- d) In the event of the resignation or other circumstances that prevents a

properly elected EFRA Official from carrying out his or her duties, the Honorary Life President or Vice President may be asked by such EFRA Officers as remain to deputise until such a time as the elected Officer is available or an Officer is elected. Such a request shall be by simple majority vote of the remaining EFRA Officers.

- e) In the event of Honorary Life Officers being called upon to assist the Executive Committee they will be entitled to reimbursement of any necessary expenses incurred. A Honorarium will not be paid.

7. Executive Board

The President or in his absence the senior Vice-President present, shall take the chair at the General Meetings and in the event of a tie, be entitled (but not bound) to exercise the casting vote. The Treasurer shall be entitled to demand and receive all money due to the Federation and shall keep proper accounts thereof. The official address of the Federation shall be the address of the General Secretary. Every member country shall furnish to the Executive Board an address for correspondence and communications addressed to that address shall be deemed to have been duly delivered in course of post. All offices under the Federation shall be honorary but the officers shall be entitled to reimbursement of expenses properly incurred (EFRA REF: EXPENSE 92-1/1), but subject always to consideration and approval of AGM.

The executive board are empowered to employ paid assistants for secretarial and other duties within budget limits, which are defined and approved at the AGM and also subject to the provisions of section 7 of this constitution. These paid assistants shall not hold EFRA committee-positions.

8. Subscription

The Annual subscription of the Federation shall be fixed from time to time by resolution of a General Meeting. Such subscription shall become due on the first of January of each year. If not paid within three months thereafter, representatives of a country in default may not, until payment take part in any activity of the Federation or be sponsored by; if not paid within twelve months, membership of the country in default shall cease.

To recover its active membership the member must pay the duly invoices pending.

The accounts will be closed on the 30th of September each year.

9. Technical Rule Changes

The time limit for the introduction of constructional rule changes will be decided at the section meetings. Important changes which effect more than one section, will be effective after approval at the AGM.

Unless specified at the AGM all technical rule changes will be effective 12 (twelve) months after the rule has been approved.

10. Associate membership

An associate membership will be available to bona fide manufacturers of model racing cars.

Associate members may be invited to speak at all EFRA general meetings and will be notified in advance of all details of proposed constructional rule changes.

They shall have the rights to place proposals regarding constructional rule changes on a general meeting or conference agenda.

Associate members have the right to general advertisement in the EFRA Handbook. The advertising fee should be settled at the AGM.

An associate member fee will be payable annually, to be agreed at the AGM.
An associate membership carries no voting rights.

11. **Duties of Executive Board Officers**

PRESIDENT:

1. Maintain contacts with IFMAR Bloc Officials.
2. Co-ordinates the efforts of the different E.F.R.A. Section Chairmen and provides advice when problems occur.
3. Takes the chair at the E.F.R.A. AGM and at E.F.R.A. Committee meetings.
4. Proposes appointment of Honorary Officers to the E.F.R.A. AGM.
5. Visits important races.
6. Forms Executive Working Committee with General Secretary and Treasurer to deal with all matters that affect the day to day running of E.F.R.A. business.
7. Liases/meets with Officials from Member Countries.

GENERAL SECRETARY:

- 1 Takes the minutes at E.F.R.A. Committee meetings and the E.F.R.A. Annual General Meeting.
- 2 Publishes a record of the minutes of these meetings.
- 3 Updates lists of Member Countries and other interested parties such as Manufacturers, Magazines and Contact addresses.
- 4 Deals with the correspondence from/to all Member Countries and maintain file copies of all correspondence.
- 5 Co-ordinates the arrangements for the E.F.R.A. Annual General Meeting. Liases with the hotel, Member Countries and provides full details of the timetable of the AGM.
- 6 In conjunction with the President and Section Chairmen draws up the Agenda for the AGM.
- 7 Co-ordinates the racing calendars of the E.F.R.A. Sections and arranges for the publishing of these calendars.
- 8 Collects the results of all E.F.R.A. sanctioned races.
- 9 Maintain copies of all Member Country Officials address changes for updating the E.F.R.A. database.
- 10 Visits important races.
- 11 Forms Executive Working Committee with President and Treasurer to deal with all matters that affect the day to day running of E.F.R.A. business.
- 12 Liases/meets with Officials from Member Countries.
- 13 Arrange for the completion and return of E.F.R.A. contracts applicable to EC events being organised the following year.

TREASURER:

- 1 Maintains a complete set of records of the Financial aspects of E.F.R.A. business.
- 2 Produces a full set of accounts as at the end of the financial year for presentation and acceptance by the Member Countries at the E.F.R.A. Annual General Meeting. Expenses have to be split down into amounts around 3000 €.
- 3 Issues International Driver's Licences to the different member countries.
- 4 Send copies of all Licence address changes received from member countries to the General Secretary for updating of the E.F.R.A. database.
- 5 Keeps abreast of all facets of bookkeeping and the financial situation of the E.F.R.A.

- 6 Before the 15th January following the AGM he sends invoices to all E.F.R.A. Member Countries regarding annual subscriptions, sanction fees for E.F.R.A. GP and EC events, entry fees for EC events.
- 7 During the year he sends invoices to Member Countries or persons everytime he is requested to do so.
- 8 He maintains a watching brief of outstanding invoices and one month after the date of maturity of the invoices he sends reminders to those Member Countries who have not paid their invoices.
- 9 Every three months he produces a report for all Committee Members giving details about the financial situation and status of all debtors.
- 10 Pays the expenses declarations of the Committee members within a week of receipt.
- 11 Refunds all the deposits as soon as the Section Chairman sends his approval.
- 12 Visits important races.
- 13 Forms Executive Working Committee with President and General Secretary to deal with all matters that affect the day to day running of E.F.R.A. business.
- 14 The Treasurer has to present his books and all assigned documents to the auditors prior to the AGM

SECTION CHAIRMEN:

- 1 Effectively manages the Section for which he is elected at the AGM.
- 2 He provides information to other E.F.R.A. Officials as and when requested.
- 3 He attends the GP organised ahead of an EC and reports upon the track, the accomodation and the organising committee.
- 4 He attends the EC relevant to his section.
- 5 As soon as the race calendar of the next year has been published he enforces the distribution of the information of the Section events on appropriate languages.
- 6 He issues race meeting sanctions after fully examining the information sent by the applicants.
- 7 He updates the list of "A" licensed drivers and decides upon the validity of an EFRA Licence.
- 8 He co-ordinates the entries for EC and WC and settles re-allocations in co-operation with the Member Countries and the organisers.
- 9 He decides if the deposits paid for GP and EC events maybe refunded and requests the Treasurer to refund any monies due.
- 10 He keeps a record of the results of all the E.F.R.A. sanctioned races.
- 11 He makes a report of the past racing season to be presented at the AGM.
- 12 He is a full member of the E.F.R.A. Committee with a seat in all E.F.R.A. Committee meetings.
- 13 He takes the Chair at the Section Meetings during the AGM.
- 14 He arranges for the minutes of the Section Meeting to be recorded and provides a copy of these minutes to the General Secretary.
- 15 He presents proposals made at the Section Meetings to the main AGM.
16. He has the authority to provide clarification on the interpretation of rules.

The following Positions do not have a seat on the E.F.R.A. Committee:

PR OFFICER:

- 1 Maintain contact with the EFRA Executive
- 2 Carry out the promotional and communicating work as decided by the AGM and EFRA Executive Committee
- 3 Attends EFRA Committee meetings when needed and AGM.
- 4 Co-ordinates the production and distribution of the regular news.
- 5 Does not have a seat on the E.F.R.A. Committee in respect of this post.

IFMAR LIAISON OFFICER:

- 1 Maintains direct contact with IFMAR bloc officials.
- 2 Acts as a central co-ordinator for all matters between E.F.R.A. and IFMAR.
- 3 Provides information to/from IFMAR/FEMCA/ROAR/FAMAR to all Sections within E.F.R.A.
- 4 Puts forward proposals drawn up and approved by the E.F.R.A. Committee to IFMAR.
- 5 Attends EFRA Committee meetings when needed and AGM.
- 6 He attends IFMAR Meetings as the full representative of E.F.R.A.
- 7 Does not have a seat on the E.F.R.A. Committee in respect of this post.

MUFFLER HOMOLOGATION OFFICER:

- 1 Receives and acknowledges the exhaust pipes from Manufacturers wishing to have their products homologated by E.F.R.A.
- 2 Passes invoice order to the E.F.R.A. Treasurer.
- 3 Measures the pipes received and makes detailed drawings.
- 4 Checks the noise level of the pipes at track.
- 5 If pipe is acceptable under E.F.R.A. standards he sends homologation certificate to the Manufacturer. Should there be any discrepancies he will advise the Manufacturer in writing as to the exact reasons why the pipe cannot be homologated.
- 6 Copies of the homologation certificate and detailed drawings are passed to the General Secretary and IFMAR Liaison Officer.
- 7 Retains the original pipe for specification purposes.
- 8 Advises the E.F.R.A. Treasurer of homologation expenses incurred.
- 9 At no time and under any circumstance will the pipes received for homologation be shown to or handed to anybody involved with the manufacture of model cars, engines or exhaust pipes.
- 10 Does not have a seat on the E.F.R.A. Committee in respect of this post.

BODY SHELL HOMOLOGATION OFFICER:

- 1 Receives and acknowledges the bodyshells from Manufacturers wishing to have their products homologated by E.F.R.A.
- 2 Passes invoice order to the E.F.R.A. Treasurer.
- 3 Checks the bodyshell against pictures, drawings or measurements provided by the Manufacturer. A 10% tolerance is acceptable.
- 4 If the bodyshell is acceptable under E.F.R.A. standards he sends homologation certificate to the Manufacturer. The certificate will bear the homologation number which the Manufacturer must mold into the production body shell. Should there be any discrepancies he will advise the Manufacturer in writing as to the exact reasons why the bodyshell cannot be homologated.
- 5 Copies of the homologation certificate and detailed drawings are passed to the General Secretary and IFMAR Liaison Officer.

- 6 Retains the original bodyshell for specification purposes.
- 7 Advises the E.F.R.A. Treasurer of homologation expenses incurred.
- 8 At no time and under any circumstance will the bodyshell received for homologation be shown to or handed to anybody involved with the manufacture of model cars or body shells.
- 9 Does not have a seat on the E.F.R.A. Committee in respect of this post.

AUDITORS

- 1) The position of an auditor is to be appointed by EFRA member countries and voted at each AGM for a period on duty of one year.
- 2) This position will be covered by two delegates, not belonging to the same national federation, nor being member of the same federation as the treasurer.
- 3) They have the right to have a look to all actions or bookkeeping, which are in conjunction with EFRA's money.
- 4) They have to present their written report to the AGM. The EFRA Board has to have knowledge about their comments prior the AGM, so that board members may prepare their reactions.

3. EFRA SANCTIONS

3.1. EFRA Sanctions

3.1.1. The object of EFRA Sanctions is to obtain uniform racing and organisational standards for major European events in all classes of radio-controlled model car racing.

Major European events are:

- European Championships
- EFRA Grand Prix
- International races with EFRA sanction

National Organisations are advised to adopt these standards and rules for use on national level.

3.1.2. To ensure the quality of these major events the minimum standards set by EFRA described here, have to be met. The EFRA Section Chairman will authorise the events after the applicant has proved able to meet the minimum standards of EFRA.

3.1.3. In order to receive an EFRA sanction, an application has to be done to the section chairman thru the national federation.

3.1.4. The National Association of the host country will hold prime responsibility for the organisation and well running of the event. They have a duty to monitor the organisation of the event from the moment the EFRA Sanction is obtained until the official results of the race are sent to EFRA.

3.1.5. If the minimum standard is not met during the event, in spite of the Sanction, EFRA may consider penalties. In that case the deposit will not be returned.

3.1.6. The committee is given the power (authority) to apply suitable sanctions in case of refusal of a race-organiser to cooperate with EFRA.

The European Championships should preferably be held during week's number 26 - 31. Week 1 of the year is the week that contains the first Thursday in January, a week starts on Monday. Changes to this pattern may only be made at the AGM or EFRA committee meeting.

3.2. EUROPEAN CHAMPIONSHIPS

3.2.1. Each section may run a maximum of 4 European Championships per year and in the event of there being more than 2 classes, it is the sections responsibility to decide which class shall be raced as secondary to the main class in any particular year. The section shall decide at the section meeting. The venue of the European Championships is to be decided at the Section Meeting.

3.2.2. The venue of the European Championships is to be decided by the EFRA AGM, 2 years ahead. The decision will be made after the applicant National Associations have presented their applications to the Section Meeting.

These applications must be sent to EFRA i.e. the section concerned, at least 6 weeks before the AGM and must contain :

- a. The organiser's name, address, fax and telephone number and email address.
- b. A single contact point for all correspondence/enquiries
- c. Diagram of track indicating length, width and direction of racing
- d. Drawing of the venue (preferably photograph) showing track, rostrum, pit area, timekeeping and general facilities
- e. Details/location of the venue
- f. Map of the area showing proximity of airports, port, roads, etc.
- g. Basic details of race timetable and dates

- h. List of race officials
- i. List of approved frequencies and list of specific frequencies that cannot be used.
- j. Practice facility
- k. 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).
- l. Any special accommodation deals, including all taxes, if applicable.
- m. Information on transport available between hotel/s and track.
- n. Voltage used in host country. Drawings of plug types.
- o. 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
- p. marshalling details if needed.

The Section Meeting will investigate the applications and may advise or propose acceptance to the AGM. It is entitled to reject applications when information is inadequate or unsatisfactory.

- 3.2.3. The host Club proposed by the National Association must have successfully organised one EFRA Grand Prix with EFRA Sanction, on the last 2 years, preferentially on the proposed track.

The EFRA Referee present at this GP in the previous year before the EC will check that all EFRA Standards are met, if due to any reason he found out that Standards are not reached he will inform directly on that subject to the EFRA Section Chairman & the EFRA General Secretary. The AGM Section meeting may waive this requirement.

An EFRA Grand Prix must be held on the same track two (2) maximum (3) months before the EC.

- 3.2.4. The National Association of a country hosting a European Championship or World Championship is subject to a special fee to EFRA, to cover the extra expenses of the EFRA involvement in that race. This fee is established by the AGM (3.5).

- 3.2.5. For a European Championship a contract, approved by the EFRA AGM will be signed by EFRA, the National Federation and the Organiser. It must be received by EFRA by 1st January (EFRA REF: CONTRACT 92-1/3).

- 3.2.6. At the AGM section meeting preceding the event the host country of European Championships will be asked to demonstrate to the meeting that they have the organisation and facilities needed to stage the event. They should also confirm that the club involved will be able to honour any promises or obligations made by their successful application the previous year.

- 3.2.7. The section meeting may decide to re-allocate the event to a "safe" venue of it's choice if rule 3.2.6. is transgressed

- 3.2.8. As soon as practical after the decision confirming the organiser of an European Championship, the host club should be sent a copy of the EFRA handbook.

- 3.2.9. At the latest, 100 days before the European Championships in question, there should be a meeting between the National Federation contact and the host club to confirm that everything is running according to the Handbook.

- 3.2.10. A member Association cannot organise a National Championship race on the same days of a European Championship in the same class/section.

- 3.2.11. A list of all EFRA licence holders must be sent to organisers of European Championship Events two (2) weeks prior to the event.

3.3 EFRA GRAND PRIX

- 3.3.1. EFRA Grand Prix have the status of “Open EFRA International Championships” of the organising country.
- 3.3.2. Each EFRA member-country may organise 1 (one) official EFRA Grand Prix per year per class. Each section may run a maximum of 3 (three) EFRA Grand Prix per year. An EFRA Grand Prix must have an EFRA Sanction. In order to obtain such, an application must be sent to EFRA i.e. the section concerned, at least 6 weeks before the AGM and must contain relevant information such as pictures of the accommodation, hotel information, camping and charges to be paid, details of facilities such as water, electric power, w.c. and showers. For each entry the organizer will pay EFRA € 5,- . The total amount will be settled with the deposit.
- 3.3.3. Applications for EFRA Grand Prix must be made in writing by the National Organisation, at least 6 weeks before the AGM stating a venue and a date. The EFRA Committee meeting will discuss and finalise the EFRA Race calendar for the following year following proposals from the sections. Venues may be changed until the AGM, but the dates must remain as decided at the Committee meeting. As soon as practical after the decision confirming the organiser of an EFRA GP, the host club should be sent a copy of the EFRA handbook. Any EFRA Grand Prix Organiser who changes a date following an AGM decision loses the EFRA Sanction for official EFRA Grand Prix status. Only an enforced change beyond the control and influence of the organising club is liable to be accepted for discussion by EFRA.
- 3.3.4. The EFRA Section Chairman must decide on the sanctions.
- 3.3.5. Organisers of EFRA Grand Prix are subject to a special fee payable to EFRA. This fee is established by the AGM (see 3.5).
- 3.3.6. If EFRA Grand Prix results shall be used as the basis for awarding points to the competitors, a general classification shall be published at the end of the racing season. The sum of the 4 best results of the season to be the final score of each driver. Points shall be given as follows:

EFRA GP1 (Less than 30 drivers)

50	46	42	38	34	32	30	28	26	24
22	21	20	19	18	17	16	15	14	13
12	11	10	9	8	7	6	5	4	3

EFRA GP2 (30 to 60 drivers)

75	71	67	63	61	59	57	55	53	51
49	48	47	46	45	44	43	42	41	40
39	38	37	36	35	34	33	32	31	30
29	28	27	26	25	24	23	22	21	20
19	18	17	16	15	14	13	12	11	10
9	8	7	6	5	4	3	2	1	1

EFRA GP3 (60 drivers plus)

100	96	92	88	84	82	80	78	76	74
73	72	71	70	69	68	67	66	65	64
63	62	61	60	59	58	57	56	55	54
53	52	51	50	49	48	47	46	45	44
43	42	41	40	39	38	37	36	35	34
33	32	31	30	29	28	27	26	25	24
23	22	21	20	19	18	17	16	15	14
13	12	11	10	9	8	7	6	5	4
3	2	1 (1 for places greater than 83)							

EUROPEAN CHAMPIONSHIP

300	280	260	240	220	210	200	190	180	170
165	160	155	150	145	140	135	130	125	120
115	110	105	100	99	98	97	96	95	94
93	92	91	90	89	88	87	86	85	84
83	82	81	80	79	78	77	76	75	74
73	72	71	70	69	68	67	66	65	64
63	62	61	60	59	58	57	56	55	54
53	52	51	50	49	48	47	46	45	44
43	42	41	40	39	38	37	36	35	34
33	32	31	30	29	28	27	26	25	24
23	22	21	20	19	18	17	16	15	5

5 for places greater than 110

WORLD CHAMPIONSHIP

500	450	400	350	320	290	260	230	200	170
160	155	150	145	140	135	130	125	120	115
110	105	100	95	90	89	88	87	86	85
84	83	82	81	80	79	78	77	76	75
74	73	72	71	70	69	68	67	66	65
64	63	62	61	60	59	58	57	56	55
54	53	52	51	50	49	48	47	46	45
44	43	42	41	40	39	38	37	36	35
34	33	32	31	30	29	28	27	26	25
24	23	22	21	20	19	18	17	16	15

5 for places greater than 100

3.4. INTERNATIONAL RACES WITH EFRA SANCTION

3.4.1. For important international events other than European Championships and EFRA Grand Prix, an EFRA Sanction can be requested, in writing only.

The EFRA Sanction will be an official recommendation of EFRA to the special event, to ensure a minimum standard. These races may not be called EFRA Grand Prix (EFRA REF: SANCTION 92-1/8).

3.4.2. Organisers of international races with an EFRA Sanction are subject to a Sanction-fee. This fee is established by the AGM.

3.5. EFRA SANCTION FEES

3.5.1. The EFRA Sanction fee is established annually by the AGM and published in the minutes of the meeting.

3.5.2. EFRA will invoice the applicant for the EFRA Sanction fee from the 1st of January of the year the race is scheduled. The invoice must be paid to EFRA within 30 days of the invoice date.

3.5.3. The organising country-member must pay all fees for World Championships, European Championships, Grand Prix's and International Races at the beginning of the year of the Championship within 30 days of the invoice date.

3.5.4. A deposit is payable for all E.C.'s and sanctioned G.P.'s. Copies of the result and the referees report should be send to the EFRA General Secretary and Section Chairman.

3.5.5. Non payment of charges invoiced by EFRA by the due date, may lead to withdrawal of the EFRA Sanction and therewith the official status of the event.

3.5.6. If a Grand Prix is cancelled for whatever reason, the sanction fee is not returnable.

3.5.7. FEES (all amounts quoted in Euro)

Membership Fees

Annual Subscription	450 (including 5 non-renewable lics.)
Section Fee	75
Full membership	850 (annual + all sections)
Associate membership	1000

Sanction Fees

European Championship	460
European Championship, Open	230
Grand Prix	150

Deposits

European Championship	600
European Championship, Open	600
Grand Prix	600 (-€ 5,- for EFRA for each entrance)

Entry Fees

European Championship	75
Open Entry Championships max.	50
Grand Prix (maximum)	40

Homologation Fees

Mufflers	500 (50% discount for Associate)
Bodyshells	500 (50% discount for Associate)
Large Scale Bodyshells	500 (50% discount for Associate)
INS-Box	800 (50% discount for Associate)
Batteries	500 (50% discount for Associate)
All transport costs for homologations to be paid by the manufacturer	

Miscellaneous

Hand Book	75
Drivers Licences	30
A5 Advert in Handbook (pdf)	750 (included in Associate fee)

3.6. ALLOCATION PROCEDURE FOR EUROPEAN AND WORLD CHAMPIONSHIPS

- 3.6.1. For European and World Championships, EFRA allocates places to all its member-countries. Each member country if present at the section meetings is entitled to have at least one (1) place allocated in each section paid for.
- 3.6.2. At the Annual Conference, each Section establishes the allocations for next years Championships, following written application from member countries.
- 3.6.3. Whilst determining the allocations for each country, the following points should be discussed, in order of priority:
- total number of drivers;
 - international results at E.C./ W.C./ Grand Prix;
 - places taken up at the last E.C.;
 - number of International Licenses issued;
 - participation in international racing;
 - length of membership of EFRA.
- Separate procedure exist for Electric off road (sse Appendix 4)
- 3.6.4. At the Annual Conference, the Chairman will propose the allocations-list to the Meeting. The Meeting may, within reason, discuss the proposed list and may ask for changes. In case of disputes, the Meeting can decide the dispute on a simple majority vote.

3.6.5 The order for the allocation list is used for re-allocation. 40 days before the EC and 60 days before a WC the places not taken up by the Countries will be re-allocated by the Section Chairman. The entry forms list must be given to the Chairman 40 days before the EC. Failing to deliver these forms list in time will lead to re-allocation of the corresponding places. The order of the allocation list determines the order of re-allocation.

The Meeting may recommend preferential re-allocation of places to countries with small initial allocations. Preferential re-allocation places must be specified in the allocations list.

3.6.6. For an European Championship the host country is allowed 2 extra places in addition to their original allocation.

3.6.7. The defending section/class Champion is allocated 1 place.

3.6.8 For each European Championships and World Championships, where places are allocated through the EFRA AGM, the entry fee is payable in advance to the EFRA treasurer. The amount is established at the AGM. The allocation fee must be paid to EFRA before January the 31st. Allocated places not paid by end of February may be reallocated to other countries by the Section Chairman. EFRA will take 10 % of the collected entry fees to cover costs. Re-allocation money will be paid to and retained by EFRA. EFRA will invoice each reallocation to the member countries without specifying the drivers name etc. No money is allowed to be paid at the track.

Reallocation money will be 1.1/2 times the normal entry fee, unless the number of places now allocated to the country in question is still less than, or the same as, the original application made (see rule 3.6.2). EFRA will pay the allocation fees received to the organising country at least 1 month before the event, unless a written agreement has been received by the Treasurer to effect payment in a different manner. If the final number of allocated places is higher than the number of allocations through the AGM it must be made official by the Section Chairman prior to the race, the EFRA treasurer must be informed so that to pay the exact number of allocations to the Organiser, otherwise EFRA pays the number of allocated places through the AGM.

3.6.9 For a IFMAR World Championship or IFMAR sanctioned event, the entry fees are payable in \$US. in advance to the EFRA Treasurer. The entry amount is established by IFMAR and is subject to a 10% EFRA surcharge. The EFRA Treasurer will invoice member federations separately for all WC allocations and these must be paid before 31st January or within one month of invoice in the case of re-allocations. Re-allocations will be charged at the normal entry fee rate. Once requested by a member country, no WC allocations can be cancelled or fees repaid.

3.6.10 All contractual correspondents between EFRA, organiser and federation related to EC's and WC's should be sent by registration mail

3.7. LEGAL LIABILITY

3.7.1. EFRA is unable to, and will not, accept any legal liability for any event for which it has granted an EFRA Sanction and accepted a sanction fee.

3.7.2. EFRA Officials cannot and will not accept any legal liability for events that may take place at an EFRA Sanctioned event at which they are acting in an advisory or supporting role.

4. INTERNATIONAL DRIVERS LICENCES

4.1. OBJECT OF THE INTERNATIONAL DRIVERS LICENCE

4.1.1. International driver's licences enable organisers to compose the qualifying heats so that novice or less experienced drivers are not mixed up with the top international drivers, in the interest of both groups.

4.1.2. All competitors at European Championships and World Championships must have a valid EFRA drivers licence.

Application for entries at EC's or WC's must be made by the National Association that have granted the EFRA licence, using the model delivered by EFRA, bearing the initials of the National Federation and the licence number. Each National Federation shall be entitled to issue EFRA licences

- 1) To its nationals;
- 2) To the nationals of other countries represented in EFRA, in compliance with the following statutory conditions:
 - a) That their parent National Federation gives each year its prior agreement to the issuing which may only take place once a year.
 - b) That they can produce for their parent National Federation (the country of their passport) a permanent proof of residence in the other country;
 - c) That their parent National Federation has recovered the EFRA licence originally issued if such exists.

No person authorised by their parent National Federation to apply for an EFRA licence from some other National Federation shall hold an EFRA licence from their parent National Federation valid for the current year.

If for very special reasons however, An EFRA licence-holder wishes to change the nationality of his licence during the current year, he would only be able to do so after having obtained his parent National Federation's consent and once his old licence has been taken back by his parent National Federation.

A National Federation may also grant an EFRA licence to a foreigner belonging to a country not yet represented in EFRA but only on condition that EFRA is immediately informed of the intention to do so, in which case EFRA will at once state if there is any reason why such an EFRA licence should not be granted. A National Federation shall advise EFRA of any refusal on its part to comply with a request of this nature.

The EFRA drivers licence must be produced personally at registration, at World Championships the licenses should be checked by the EFRA Official.

The organiser will register the licence numbers of all drivers and record these in all results.

4.1.3. All competitors at EFRA Grand Prix and other EFRA sanctioned events (apart from EC's) must either have a valid EFRA drivers license, or a valid National License issued by their National organization. The licence must be produced personally at registration. The organiser will register the licence numbers of all drivers and record these in the final results.

Drivers with an international EFRA licence take precedence over non-EFRA licensed drivers at EFRA Grand Prix in the event of over subscription.

4.1.4. Nationality of a competitor or driver

All drivers, irrespective of the nationality of their licence, participating in any IFMAR World Championship or EFRA European Championship event, shall

retain the nationality of their passport in all official documents, meetings, information bulletins and prize-giving ceremonies.

4.2. CLASSES OF LICENCE

4.2.1. A section is empowered to issue different classes of licence, based on the experience of the drivers or on their results during E.C.'s or G.P.'s should they so wish.

4.2.2. The grading system to be used will be settled in the section meeting and described in the section rules.

4.3. APPLYING FOR INTERNATIONAL DRIVERS LICENCE

4.3.1. Applications for International Drivers Licences are made by the National Federation to the EFRA Treasurer, before the 1st of March of every year. EFRA will only issue licences when the country applying has settled all payments to EFRA and the payments for the cost of licences have been received by EFRA.

4.3.2. The cost of an International Drivers Licence is established by the AGM.

4.3.3. The International Drivers Licence must be renewed every year and runs for a calendar year, ending on the 31st of December of the year of issue.

4.3.4. The National Association may request a number of licences from EFRA providing that it remits the appropriate fee. After the receipt of the fee, licences as requested and paid for will be issued to the National Association.

4.3.5. The National Association should fill in the licence in the appropriate sections before issuing to a driver.

The licence must carry the name of the National Organisation.

The name of the driver and a licence number must also be entered and recorded. A list of licence holders including Name, Address and Licence Number should be sent to the EFRA Treasurer.

The individual drivers licence number should remain unchanged from year to year and must not be used for re-issue to other drivers. Each number is a personal number.

4.3.6. If for whatever reason a driver should lose a current EFRA Licence, then the National Federation may apply in writing to the EFRA Treasurer for a replacement to be issued. No fee will be charged for this service but it is subject to the fact that the original licence was registered as issued by the appropriate National Federation.

4.4. CANCELLATION OF INTERNATIONAL LICENCES

4.4.1. Member Federations have the absolute right to issue or cancel International Licences.

4.4.2. EFRA additionally reserves the right to cancel or withdraw an International Licence from any driver who:-

a) Has been adjudged to have flagrantly and repeatedly broken EFRA or IFMAR rules.

NOTE: The issue of Warnings for driving offences during a race would not in normal circumstances constitute grounds for cancellation of an International Licence.

b) Has been excluded from his National Federation.

4.4.3. Cancellation of an EFRA International Licence must be authorised by the EFRA Executive Committee and the driver is entitled to representation at any hearing of a proposal to cancel an International Licence.

4.4.4. The driver must be given 14 days notice in writing of any such hearing which will normally be included in the Agenda of an Executive Committee Meeting.

4.4.5. The driver has the right to appeal within 14 (fourteen) days of the decision.

4.5 TEAM DRIVING

- 4.5.1 In a case where team driving, unsporting behaviour or conduct by persons that is construed as being prejudicial to a fair race are suspected, the official referee will consult with the race director (or vice versa). In cases where both officials agreed that such action have occurred and they have been unable to take action, they will report to the most senior EFRA official present, or otherwise the Section Chairman, who may take any action apart from issue penalty or sanction. The senior EFRA official, or Section Chairman will present the full circumstances of any such report to the EFRA Committee at the next meeting opportunity.
- 4.5.2 Any driver directly involved must be called to represent himself/herself at a meeting of the EFRA Committee and will be given due notice according to rule: 4.4.4. Any failure to attend or otherwise represent himself/herself will be taken into consideration.
- 4.5.3 For instances of team driving, gross misconduct, serious unsportmanslike behaviour, conduct prejudicial to a fair race, the EFRA Committee may exercise its right to cancel an International Racing Licence for incremental periods of six month up to a maximum period of five years.

5. GENERAL REQUIREMENTS EFRA EVENTS

5.1. GENERAL REQUIREMENTS TRACK

- 5.1.1. Access: approach by car must be possible to within at least 100 mtr. of the pits.
- 5.1.2. Parking: parking for competitors must be available within 100 mtr. of the pits.
- 5.1.3. Spectators area barriers must separate spectators from the track and the pit area.
- 5.1.4. Public conveniences: water and toilets for both competitors and spectators must be provided.
- 5.1.5. Refreshments: a place should be provided for this purpose.
- 5.1.6. Electricity: 230 V must be available in the drivers area for charging batteries and using solder iron. The organiser can allow the use of other electric equipment if power supply is sufficient.
- 5.1.7. Hotel and camping: sufficient and reasonably priced hotel and camping facilities within 20 minutes of the track must be available.
Wherever possible, it is preferable that camping should be at trackside. Any charges must be fixed before arrival of competitors and mentioned in the invitations.
- 5.1.8. Track requirements are specified per appendices.

5.2. ACCOMMODATION REQUIREMENTS

- 5.2.1. Drivers area must accommodate all drivers and be equipped with tables and protection against bad weather (outdoor racing). The drivers rostrum must be accessible from the drivers area.
- 5.2.2. The drivers rostrum must accommodate 10 drivers with minimum 80cm space for each driver
Width of the rostrum must be minimum 1.25 mtr.
Height of the rostrum - floor to be:-

Standard	Between 2 and 3 mtrs
1:12 Electric Track Section	Between 1 and 3 mtrs
1:10 Electric Off Road Section	Between 1.5 and 3 mtrs

 Access to the rostrum must be by a solid stair, with a minimum width of 1.20 mtr. A strong parapet is mandatory. The rostrum must be protected or capable of being protected against bad weather.
- 5.2.3. The drivers rostrum must be placed in a position that provides equal view of the track to each of the drivers at any place on the rostrum, during practice and racing.
The view may not be obstructed by any object (pillar, flagpole, other drivers etc.).
The distance from the front of the rostrum to the nearest part of the track must be between 2 and 4 mtr.
- 5.2.4. The transmitter impound must be close or if possible on the rostrum. Transmitters must be protected against bad weather and stored in a safe way.
- 5.2.5. Timing and lap counting area must be located at a slow part of the track, with a good view of the track for all lap counting officials. The number of the car must be readable for at least 2 seconds from that area.
Car numbers for 1:8 I.C. must be min. 40mm height, on a white surface of 55x55mm or 55mmØ. Car numbers for Large scale must be min. 80mm height, on a white surface of 70x98mm. Car numbers for all other scales, excluding 1/12, must be minimum 40mm in height, black, on white background of 55mm

square or diameter. The numbers should be printed on a matt, not high glossy surface.

No other text is allowed inside the measured white area.

Proper fonts and samples could be downloaded from the EFRA Webpage: www.efra.se Those will be compulsory from 2008.

Car numbers must be used as provided by the Organisers

Adequate length must be provided for the lap counting officials

The area must be protected against bad weather. Interruption of lap counting officials by drivers must be prevented.

5.2.6. Timing and lap counting area must not be accessible to competitors or spectators.

5.2.7. A scoreboard must be positioned at a convenient place not far from the timing and lap counting area and accessible to all competitors. The scoreboard must be protected against rain and wind.

5.2.8. A frequency control board must be available during practice. It should be positioned near the transmitter impound or the drivers rostrum.

5.3. SAFETY

5.3.1. The safety of the spectators is of prime importance and must be considered when laying out track and spectators area.

5.3.2. The safety of officials, helpers, competitors and accompanying people is of equal importance, but it is assumed that they are more aware of any potential danger.

5.3.3. Spectators, competitors and officials must be efficiently protected against the cars by adequate barriers.

5.3.4. When dots are used as barriers to prevent shortcutting of corners, they must be placed in a way that cars cannot "fly" into the public when they hit the dot at full speed.

5.3.5. Technical inspection must always include the bumpers (no sharp edges allowed), or other protruding parts of the cars. They may never be placed or designed in such a way as may cause serious injuries in case of an accident.

5.3.6. First-aid supplies: The minimum should be available in case of necessity. It is recommended that there also is equipment to clean eyes in case of accident with splashing glue, methanol, petrol etc.

5.3.7. First-aid: a first-aid officer should be present during events to which large crowds will be attracted.

5.3.8. Police and ambulance services must have easy access to all areas both public and restricted.

5.3.9. A public liability insurance, against accidents, and legal liability is compulsory for all events. The cover must be applicable to all competitors and officials, irrespective of their nationality or sporting status.

A copy of the insurance certificate should be presented to the Section Chairman prior to the event.

5.3.10 Mobile phones are not allowed to be used on the rostrum, pitlane or on the track.

Other transmitting devices, except those who are needed for the organiser, are not allowed to be used.

With the exception of the drivers radio equipment

5.3.11 In the case of a race which is interrupted for more than 60 minutes for reasons beyond the control of the organisers (bad weather conditions with safety risks

for all persons at the meeting), the referees together with the Race-director will decide whether to cancel or continue the meeting.

- 5.3.12 Marshals shall be provided with suitable protective gloves to minimise the risk of injury when coming into contact with the moving parts of the car. Firmly attached shoes with no open toes must be used, to wear safety jackets is advisable.

5.4. LAPCOUNTING AND TIME KEEPING AND COMPUTER REQUIREMENTS

- 5.4.1. Independent systems must be used simultaneously at EFRA Sanctioned events.
- 5.4.2. For European Championships only, EFRA will check both systems.
- 5.4.3. These systems must satisfy the requirements of EFRA and therefore must be proposed and explained in the application.
- 5.4.4. Both systems will be operated by the organising club.
- 5.4.5. The first system must produce a record of all the individual laptimes of all cars and the number of laps and final times after finishing.
- 5.4.6. The second system will be used as a back up system and must produce a record of all individual laptimes and the number of laps and final times after finishing. The second system maybe manual or electronic.
- 5.4.7. Lap times and final times must be recorded in hours, minutes, seconds and 1/100th of seconds. At least 1 (one) Lap Recording System must be capable of this.
- 5.4.8. Electronic systems are used, printouts must be kept with the record sheet, on which the final result is written down.
- 5.4.9. The results from the first and second system are compared and in case of differences, the time-keeping official should examine the data produced and in particular the laptime-sheets. The final decision on the result is the responsibility of the Timekeeper.
- 5.4.10. Race director and/or lapcounting at EC's must have a suitable working personal computer with proper, race proven programs to sort the laptimes, print results from heats, final positions after each series of races within 15 minutes.
- 5.4.11. The time-keeping official is responsible for publication of the final results. He must store all the data produced by the 2 systems until the end of the meeting. They can be used in case of protest against the result.
- 5.4.12. Electronic systems must be connected to a reliable power source (not a generator). Connecting plugs must be firm and not easy to disconnect. When 2 electronic systems are run simultaneously, they should not be connected to the same power source.
- 5.4.13. For timekeeping accommodation requirements, see 5.2.5. and 5.2.6.
- 5.4.14. The official result sheets containing results of all heats, semis and finals, must be sent to the EFRA Section it concerns within 10 days of the race.

5.5 CLASSIFICATION OF DRIVERS

- 5.5.1. Qualification for finals will be based upon each drivers best single score achieved during the qualifying heats.
- 5.5.2. In the case of more than one driver recording identical best results at the end of qualifications, the next best result is taken.
- 5.5.3. In the case of more than one driver recording identical best results in a final the driver starting with the highest number is classified as the fastest. (e.g. if numbers 5 & 2 are equal then 5 is deemed as the highest final placing)
- 5.5.4. In the case of more than one driver recording identical best results in a final and having used all possibilities to sort them out without success, the qualification order will decide.

6. ORGANISATION OF EFRA EVENTS

6.1. RACE ORGANISATION REQUIREMENTS

6.1.1. Preliminary Checks:

Before requesting an EFRA sanctioned event, the club must:

- a) have the confidence they can offer foreign competitors a race that is worth all the travelling and expense in all respects;
- b) have the track available from at least Friday-morning prior to the race (09.00 till 18.00 hours minimum), unless stated differently per appendix;
- c) be sure the track and accommodation are according to the rules as described in chapter 5 and per appendix;
- d) have enough experienced volunteers to organise the race, and set up a committee to do this, for lapcounting and timekeeping, for technical inspection, to prepare the track and accommodation, to marshall and to arrange hotel accommodation;
- e) have the necessary authorisation to hold the race, i.e. from the owner of the track or property, with regard to noise, spectators, refreshments, chargeable entries etc.
- f) have the right insurance for an international event.

6.1.2. Request for EFRA Grand Prix and European Championship (see chap.3)

The organising club must request the race through its National Association, who will forward this request to EFRA as described in paragraph 3.2.2. and 3.3.3.

The National Association may reject such a request even before sending it to EFRA, they being in the first instance responsible for such a race.

6.1.3. Request for EFRA Sanction or other major international meetings are made in the same way. Such requests can be made to EFRA at any time of the year.

6.2. INVITATIONS AND FORMS FOR EUROPEAN CHAMPIONSHIPS

6.2.1. The host Federation shall provide copies of the sufficient necessary information to the EFRA Section Chairman not less than 120 days before the event. The information shall include an program to be approved by the section Chairman, a plan of the track, how to get to the track, hotel accommodation etc. must be received by all EFRA contact addresses at the latest 90 days before the event. There must be a hotel list with hotel class, addresses and prices.

The invitation must state whether the race is to be run in a clockwise or anticlockwise direction.

The EFRA Section Chairman is responsible to distribute this information together with the entry forms, and should be published on the EFRA website; www.efra.se

6.2.2. For European Championships the National Federation is responsible for sending the entry-forms of their national team to the EFRA Section Chairman, at the latest 60 days before the event. They may send in entry-forms for up to 4 drivers additional to their country allocation for reallocation purposes. Those extra entry-forms must be marked clearly "FOR REALLOCATION".

A list of the team members, mentioning their EFRA DRIVERS LICENCE numbers, must be send to the EFRA Section Chairman at the same time (EFRA REF: ENTRYFORM 92-1/1 and RE-ALLOCATION 92-1/1).

6.2.3. 55 Days before the event the places not taken up will be re-allocated by Section Chairman, place by place and in the order established at the AGM. The re-allocation will be published to all the participating countries 40 days before the

event at the latest. If the re-allocated places do not fill the entire series of heats, the host country may provide the remaining drivers.

6.2.4. Only drivers with an international EFRA licence are allowed to participate in a European Championship.

6.2.5. Organisers must confirm the entries of all competitors participating in the race, 30 days before the event at the latest, to both the National contact address and each competitor.

6.3. INVITATION AND ENTRY FORMS FOR EFRA GRAND PRIX ETC.

6.3.1. Invitations, Entry forms and time tables with additional information must be published on, or linked from, the EFRA web site at least 60 days before the event.

6.3.2. The National Association distribute the entry forms to the interested drivers, Filling in the form and sending it to the organising Club is the responsibility of the individual driver.

Closing date for the entries must be marked on the entry form but should not be later than 7 days before the event.

6.3.3. The maximum number of entries at an EFRA Grand Prix may not exceed 120.

6.3.4. Drivers who cannot take part because of over-subscription should be notified by the organisers.

6.4. PROMOTION AND SPONSORING

6.4.1. EFRA events must be organised in such a way that the sport is well represented to both the spectators and the competitors. Enough advertising must be made in the area to draw spectators and to interested the Press in the EFRA event.

6.4.2. When sponsors are attracted, they may only be offered advertising space on cars or drivers (shirts or jackets), when the sponsors name does not conflict with any manufacturer of cars, radio equipment, engines (related to the model car sport), present or represented in the race.

Sponsors may not demand from the organisers the exclusive use of their name or their product by all competitors during the event.

6.5. CONVENIENCE AND SECURITY

6.5.1. For European Championships, public convenience and refreshments must be available to all competitors from at least Wednesday onwards.

6.5.2. For EFRA Grand Prix, public convenience and refreshments must be available to all competitors from Friday onwards.

6.5.3. All possible action must be taken to avoid any danger for public or competitors (see 5.3.).The police must be advised of the meeting.

6.5.4. The Pit area must be secure. All possible care must be made to safeguard both the drivers and their equipment.

7. RACE OFFICIALS

7.1. REFEREES

List see chapter 1

- 7.1.1. The main task of Referees is to observe the racing and in particular good sportsmanship during racing.

He will ensure that the current EFRA rules are observed by everybody.

The referee for a Championship should be nominated at least 60 days previous to the event.

- 7.1.2. Referees are part of the International Jury when a meeting is called by the Race Director. The Referees will settle any dispute regarding interpretation of the rules.

- 7.1.3 Two EFRA referees, (see approved list) appointed by the section chairman after consultation with the national federation, are required for all EFRA EC's with allocated places. At least one of them must be from abroad and will be head referee. The hosting federation must provide suitably qualified substitute(s) to assist and stand in.

For GP's and open EC's one EFRA referee will suffice (see approved list). A second referee, known by name and approved by the national federation but not necessarily on the approved list may be accepted. The hosting club must provide a suitable qualified substitute to assist and stand in. EFRA does not pay any referee expenses for GP's or sanctioned International races.

- 7.1.4. EFRA referees are appointed by EFRA for a period of two (2) years after being proposed by their National Federation. The EFRA Referee form must be used and the registration year will be indicated on the Referee list, chapter 1.

EFRA referees must be experienced and unbiased people with a good knowledge of the English language and EFRA rules. They must have acted as Referee at least at National level in that class before being proposed by their National Federation.

Each Section will prepared a list of approved Referees from those proposed together with an indication of their experience level.

EFRA Referees are divided in 3 categories

Grade C: Grand Prix or International Meetings

Grade B: European Championships

Grade A: World Championships

Grade A and B EFRA Referees must, after proposed by National Federation, receive the sanction of the appropriate Section Chairman.

Appointment to be made by the EFRA Executive Committee.

- 7.1.5. Efra should pay the travelling costs (agreed in advance) of one non-national referee appointed to European Championships with allocated places at the AGM. Other costs to be supported by the organiser.

Referees are entitled to claim a maximum of 92 € (or equivalent) for lodging, sundries and meals per 24H period from the organising club. Higher costs will be the responsibility of the referee or to be arranged in advance with organiser. All claimed costs, as far as possible, must be duly documented (e.g. bills, tickets, receipts etc.) However it may be assumed that the organiser reserves decent hotel accommodation and provides comfort at tracksite (Lunches, refreshments, dinner-party etc.)

7.1.6. REFEREES DUTIES

At EFRA events at all times during the qualifying heats, both referees in turn will watch and observe the racing from start to finish.

During the finals both referees must observe the racing from start to finish. The host Federation must provide suitably qualified substitutes to stand in for these referees should they be called away from their duties. The expenses of these substitutes must be clarified in advance between host Federation and the organising club.

7.1.7. Both referees always work together, they take decisions and issue warnings and instructions.

The referees may take action after an initial warning, but in all cases a maximum of 3 warnings means automatic disqualification.

7.1.7 a The Referees will agree on any time or other penalties to be awarded following consultation with the Race Director taking into account the likely advantages to be gained by Jump Starts etc. on individual tracks. They will also decide the practical limits for numbers of pit lane mechanics. This will normally be limited to:

a) 1 mechanic plus Team Manager during qualification

b) 2 mechanics plus Team Manager during finals.

If space permits these numbers can be adjusted upwards.

7.1.8. POINTS OF OBSERVATION

7.1.8a. Bad sportsmanship during racing, i.e. impeding the progress of other participants, deliberate slowing down or waiting for another car, deliberate crashing into another car, deliberate cutting of corners and reckless driving in general.

7.1.8.b Team driving, conduct unbecoming or interfering with the fair outcome of a race (refer to rule 4.5 UNSPORTMANSLIKE BEHAVIOUR)

7.1.9. Unsporting behaviour of drivers and mechanics involved in the racing.

7.1.10. Incorrect use of the entry and exit to the pits.

7.1.11. Repairs and refuelling outside the pit area.

7.1.12. Cars that do not conform to the regulations before the start is given or during the racing (i.e. loss of the bodyshell, exceeding the noise-rules due to loss or damage of the silencer).

7.1.13. Cars that are in an undriveable or dangerous condition due to damage or malfunctioning of the car.

7.1.14. Starting procedure, i.e. writing down start line infringements and if necessary reporting these to the time-keeper.

7.1.15. It is not the duty or the responsibility of the referee to check that the cars conform to the technical rules.

This is always the responsibility of the Technical Inspector.

The referee checks the method used for technical inspection.

7.1.16. REFEREES AUTHORITY

7.1.16a. The referee issues warnings in the event of infringements of any of the points as described under 7.1.8.-11 and ultimately may even issue a black-flag (disqualification) when his warnings are not effective.

7.1.17. Warnings and instructions are announced by the referee himself and he keeps a record of the warnings and instructions issued (referee-notes).

3 Successive warnings lead to disqualification (black flag).

Instructions issued by the referee must be observed immediately.

7.1.18. Warnings for bad sportsmanship (7.1.8.-7.1.9.) are announced with the words: **“FIRST WARNING TO CAR NO.....FOR BAD DRIVING”**.

- 7.1.19. Warnings for mis-use of the pit are (7.1.10 and 7.1.11) are announced with the words:
“FIRST (SECOND) WARNING TO CAR NO.....FOR MIS-USE OF THE PIT AREA”.
- 7.1.20. Instructions for repairs (7.1.12 and 7.1.13.) are announced with the words:
“CAR NO.....REPAIR BODY, SILENCER, CAR ETC”.
- 7.1.21. The warnings and instructions issued by the referee are indisputable and final and may not be interfered with by anyone.
 Under no circumstance may a warning or an instruction from the referee lead to the interruption of the whole race.
- 7.1.22. Appeals against the decisions of the referee must be addressed to EFRA General Secretary, after the meeting and in writing.
 EFRA is not obliged to act on such a complaint, but will seriously study it and answer.
- 7.1.23. REFEREES FACILITIES**
 Referees must be offered a place from where they can observe the track from the view as seen by the drivers. Preferably it should be on the rostrum. The place must be separated from the drivers area, to assure a quiet and undisturbed working environment. Protection must be given against bad weather (walls, roof etc).
- 7.1.24. The place must be equipped with 2 chairs, a table, a microphone and a monitor to watch the race order. With the microphone the Referee must be able to announce his warnings or instructions at any time during the race. A system of preference for the Referees microphone over the announcers microphone must be provided by organisers.
- 7.1.24a Referees should be able to communicate verbally with each other, the Race Director and Lap Counting Supervisor.
- 7.1.25. It may be assumed that the referees comfort is provided for by the organisers (lunch, refreshments, dinner-party etc.).
- 7.1.26. REFEREES REPORT (EFRA REF: REFEREE 92-1/7)**
- 7.1.26a. Both referees make up their official EFRA report directly after the race, hand over a copy to the Race Director, collect the final race results from him and send copies of all these documents to the Section Chairman and General Secretary.
 The report should contain general information about the organisation, accommodation and races.
 Referee notes with issued warnings etc should be included.
- 7.2. TIME KEEPING SUPERVISOR AT EUROPEAN CHAMPIONSHIPS**
- 7.2.1. For all European Championships, EFRA will approve a Time-keeping Supervisor to check the systems provided and operated by the organising club.
- 7.2.2. EFRA will not be responsible for the costs.
- 7.2.3. EFRA approves the equipment of both Time-keeping systems.
- 7.2.4. The organising club must provide experienced lapcounters and a suitable accommodation for the Time-keeping Supervisor.
- 7.2.5. The Time-keeping Supervisor is responsible for recording all the individual laptimes and total laps plus finishing time of all drivers during all heats, semi-finals and finals.
 He is not responsible for the classification of the results, nor for the selection of drivers for semi-finals and finals.
- 7.2.6. After the finish of any heat, semi-final or final, the results of the first and second time-keeping system are compared by the Time- keeping Supervisor and in

case of differences between the 2 systems, the Time-keeping Supervisor investigates both results and takes the decision on the final result. Only the results approved by the Time-keeping Supervisor may be published to the competitors and are official.

- 7.2.7. In case of protests against results, the Time-keeping Supervisor together with the Race-Director will check on the questioned result and will take the decision.
- 7.2.8. All results, in writing, printing or otherwise, in their original condition are property of EFRA and kept by the EFRA Time-keeping Supervisor until the end of the event (see 7.2.1.). After the event all relevant data will be stored in EFRA files. Copies of the original data are left with the organisers.

7.3. RACE OFFICIALS

7.3.1. Mandatory Officials.

In EFRA Sanctioned races it is mandatory to have the following Official positions held by different persons:

- a. Race-Director
- b. Time-keeper
- c. Technical Inspector

Other Officials have to deal with:

- d. registration of entrants, checking licences, collection of fees;
- e. supervise transmitter impound;
- f. giving start and finish signals;
- g. lap-counting and time-keeping;
- h. recording and publishing results;
- i. separation of public/drivers area and track
- j. supervising the marshalling around the track;
- k. track marshalling.

7.3.2. Qualification of Officials.

All Officials must be properly trained and experienced persons, with the main positions held by persons with international experience and a good knowledge of the rules and the English language.

7.3.3. Selection of the Officials.

For EFRA Sanctioned races, the organising club may select all the Officials. The Race-Director must be approved by the National Association.

For European Championships the Race-Director must be known and approved by EFRA as well.

7.3.4. All Officials, except Referees and the Time-keeping Supervisors, are subordinate to the Race-Director, who issues detailed instructions for all jobs.

7.3.5. No Official is allowed to take part in a race.

7.3.6. Officials should be clearly distinguished from competitors and spectators by wearing a band or otherwise.

7.3.7. No Race Official is empowered to make interpretations of any EFRA Constructional or Procedural Rule either during technical inspection or racing without full approval of the International Jury.

During the meeting of the International Jury which is convened for the purpose of approving any such interpretations, it is the duty of the Referees to provide authoritative guidance on the interpretation of any rule in question.

7.4. INTERNATIONAL JURY

7.4.1. The international jury consists of the section chairman (no voting authority) if present all Team-Managers or their deputy of the countries present, the Race-

- Director and the 2 EFRA Referees. All decisions are taken by simple majority, one vote per person and no proxy votes. In case of parity of votes, the Race-Director has to decide by vote. A written statement is made giving the result of each decision must be published.
- 7.4.2. At Championships, Team-Managers preferably do not take part in the race. They must speak English.
- 7.4.3. Responsibilities of the International Jury:
- to adjudicate in unforeseen situations.
 - to adjudicate in the case of protests if needed.
 - to amend the schedule.
 - to check that the race is run according to the official EFRA rules.
- 7.4.4. When necessary, the Race-Director calls an International Jury meeting. The Referees may also call an International Jury meeting to settle disputes or protests against unforeseen situations. A written agreement of a minimum of 3 Team Managers have the power to call an International Jury meeting. The Race-Director must provide a room or other place for the international jury to meet in seclusion.
- 7.4.5. The international jury is not responsible for the organisation and the well-running of the race.
- 7.4.6. The International Jury may only adjudicate in the interpretation of the officials rules. It may not either alter or ignore the rules and may not instigate its own rules.

7.5. TEAM MANAGER

- 7.5.1. The Team Manager or a nominated deputy, approved by the Race Director should be present during all official racing and is a member of the International Jury. The Team Manager is appointed by his national association.
- 7.5.2. Responsibilities of the Team Manager are:
- To register on behalf of his team providing the organisers with all driver's EFRA licences and frequencies.
 - Be present at the technical control either before, during or after the end of the race, in which team members participate.
 - Look after the welfare and behaviour of his team and take care they receive proper accommodation in the pits area.
 - He must attend the Team managers meeting(s) prior to the start of the race.
 - He is the link between his team and the race direction by receiving all information referring to:
 - time table changes
 - frequency changes
 - results after every qualification round, sub finals, semi-finals and finals
 - other information referring to the race.
 - He is allowed to stay in the pit area when a race of one of his team members is in progress.
 - He will receive a list with frequencies from Race Control for his drivers before the official race (timed practice) starts, so he can check that there are no discrepancies
- 7.5.3. Voting by Team Managers
- During a meeting of the International Jury, at least 2/3 of all countries must be present at the meeting. The Team Manager or his deputy must be present. No proxy votes.

8. GENERAL RACE PROCEDURE

8.1. PRACTICE AT EUROPEAN CHAMPIONSHIPS

- 8.1.1. At European Championships, at least 1 series of organised practice in heats per class is compulsory.
It is compulsory to run the organised practice with official starting, official time keeping with the results published, as in official racing.
- 8.1.2. Results scored during organised practice could determine the start order (when using delayed start) in Round 1 of the qualifying heats.
- 8.1.3. Organised practice must be seen as a last rehearsal and test for both the organisers and the drivers and therefore all EFRA rules have to be followed seriously.
- 8.1.4. Free practice for all drivers CAN be allowed prior to the organised practice. During free practice a frequency board must be in use. In order to give every driver the same free practice and organised practice time a ticket system may be used under the control of the Race Director.
Whether it is free, organised or timed practice, the identity of each driver must be carefully checked upon arrival on the rostrum.
- 8.1.5. Free practice on the day of racing may be allowed by the organisers till 30 minutes before the start of the first heat. This is not compulsory.
- 8.1.6. Free practice may only be allowed between the start of the first heat and the finish of the main final at the discretion of the organiser. Free practice is not mandatory. If free practice is planned it must be well known to everybody fairly in time.
- 8.1.7. A driver, not taking part in the organised practice, may not complain later to the organiser in case of radio-interference etc.

8.2. PRACTICE AT OTHER EFRA SANCTIONED RACES

- 8.2.1. At least one day of free practice for all drivers who wish to take part is recommended; normally Friday.
- 8.2.2. During the free practice the frequency board must be in use.
- 8.2.3. An organised practice of only one series of only one class is optional. This organised practice should be used as a last rehearsal and test and must include official time-keeping (see 8.1.1.).
- 8.2.4. Free practice on the race-days may be allowed till 30 minutes before the start of the first heat and after the prize-ceremony, but is not compulsory.
- 8.2.5. If the organizer has started organized practise, all drivers must respect the time schedule and the heats set. If a driver is caught cheating, for instance taking part in two different practise heats. This driver will be disqualified from the race.

8.3. ARRANGEMENT OF THE HEATS

- 8.3.1. For arranging the heats the organiser has to consider the skill of each driver. If the section has a grading system for licences, only drivers with the same grading may compete in the same heats.
- 8.3.2. Under no circumstances is it allowed to mix non-licensed drivers with licensed drivers.
- 8.3.3. The separation of the non-licensed and licensed drivers is for the qualifying heats only.
- 8.3.4. One arrangement of heats may be used for one class only and must be different for following classes, with the purpose of finding different opponents.
- 8.3.5. Organisers may only change the composition of a heat when there is a serious and obvious problem that cannot be solved otherwise.

8.3.6 Prior to commencement of Qualifying Rounds, drivers should be re-grouped for qualifying heats taking into account controlled practice results and/or upon the Race Officials observations.

8.4. REGISTRATION

8.4.1. At European Championships drivers registration must take place on the day prior to the race. Registration will be done by the National Team Manager. During registration the drivers licence is checked. The licence numbers will be registered by the race organiser.

8.4.2. At EFRA Grand Prix and other EFRA sanctioned races, drivers registration may take place up till 30 minutes before the start of the first heat.

8.4.3. Drivers registration must involve:

- paying the entry fee (G.P.'s only);
- checking the international drivers licence;
- receiving a list with the heat arrangement/timetable, including the frequencies used;
- receiving other necessary information.

8.4.4. At every EFRA event, pre-registration may be requested by the organisers. Limit date for pre-registration must be 72 hours before the official limit time for registration. Pre-registration must involve:

- Name of driver
- Country
- EFRA Licence number
- At least two (2) frequencies

8.5. FREQUENCIES AND FREQUENCY CHANGES

8.5.1. Frequencies authorised by the competent body of the country concerned will be used.

Other frequencies may only be used with the approval of the organisers, who take then responsibility.

Organisers may refuse non-authorised frequencies, providing competitors have been notified in the Race Invitations.

8.5.2. In case of more than one driver using the same frequency during practice, the time for each driver must be divided equally.

8.5.3. In case of 2 drivers using the same frequency who qualify for the same semi-final or final, the faster qualified driver will keep his frequency and the other must change.

8.5.4. When a frequency change is required, up to 10 minutes time must be allowed following notification to carry out the change.

8.5.5. Slower qualifying drivers, who cannot or will not change their frequency, will not take part in the semi-final or final for which they have qualified.

8.5.6. If a driver must change his frequency before the start of a semi-final or final due to an error of the organisers, he will be allowed up to 10 minutes time to carry out the change.

8.5.7. If a driver finds his radio-equipment defective or has made an error in the selection of his crystals, the race will not be delayed beyond the schedule (see Racing Formats).

8.5.8. All frequencies and frequency changes must, at all times, be authorised, in writing, by the respective countries team manager and designated Official before the frequency is approved or the change is made.

8.5.9. No frequencies will be published on heatsheets and other public information. The frequencies used by the drivers will only be known to the race-officials.

8.5.10 A minimum of 10 kHz between frequencies must be used. A Frequency spacing of 20kHz between the competitors is recommended.

8.6. TRANSMITTER AND TRANSMITTER IMPOUND

There can be 2 different kind of transmitters;

- a) Transmitters with a crystal that can be changed. See rules 8.6.1 / 8.6.2 / 8.6.3
- b) Transmitters on an ultra high frequency using a software decoding system that seeks for a free channel . Anybody using these kind of transmitters cannot ask for a delay for radio interference.

8.6.1. Transmitters must be constructed in such a manner, that the crystal can be changed. All competitors must have at least one alternative frequency available. Voltage supply to the transmitter must not exceed the manufacturer's type approval or National authority recommendations. Any driver found to be using external or additional battery packs must have proof that it conforms to the radio manufacturer's specifications.No changes or additions are allowed on the antenna unless authorised by the original manufacturer.

8.6.2. At European Championships transmitter must be checked by using a frequency-counter and a spectrum-analyser, operated by a qualified official. EFRA will provide equipment if available for use at technical inspection.

8.6.3. Spare transmitters must have the crystals removed and if possible must be kept out of the pits.

8.6.4. The organisers must provide protected and secure storage for impounded transmitter, preferably adjacent to the drivers rostrum.

8.6.5. Transmitters are impounded immediately after a request by the Race Director or other Official. When impounded for the first time, transmitters are marked with heat-number or with identification number of the driver and are stored accordingly.

8.6.6. Transmitters must be impounded at all times whilst the race is in progress.

8.6.7. Transmitters are only released for the next race after all the transmitters used in the previous race are impounded by the Officials. Transmitter-impound must take place immediately after the driver has completed his race or has finished driving and is leaving the drivers rostrum.

8.6.8. Transmitters will be under the control of the Race Organisers.

8.6.9. Transmitters may never be taken onto the track during the racing.

8.6.10. It is not allowed to use any form of telemetry with active transmission.

Clarification: It is not allowed for any wireless signals to be transmitted from the car to an external source during the race that is judged to give the driver a competitive advantage during that particular race!

8.7. TECHNICAL INSPECTION

8.7.1. Admission Inspection must always take place in an area protected from intrusion and before the start of the first heat. Cars must be presented for inspection at requested by the Officials any time during the meeting. Random checks on technical specifications can be done during the whole race. During Technical Inspection only the Driver or Mechanic and the Team manager are entitled to be present in addition to Race Officials.

Under all circumstances it is the responsibility of the driver that his car is within the EFRA rules during a race meeting. If a car is found illegal during heats, sub-finals or final, it's result will be made void and the car has to stay in technical inspection until the result is published and the protest time is over.

- 8.7.2. At European Championships admission inspection must take place before the timed practice.
- 8.7.3. Technical inspection must include a thorough check-out of the car, weight limit, motor, muffler, tank, batteries, tyres, homologation of bodies, spoiler and overall dimensions. At European Championships, also of the transmitter (see 8.6.2.).
Any tank found illegal after a heat or final shall be removed from the car and inspected for a second time after an initial "cool down period" of app. 15 minutes. This period of 15 minutes is only necessary in case the temperatures are above 20° C. Only EFRA approved equipment for measuring are allowed.
- 8.7.4. Only one car per driver per class will be accepted. When transmitters are checked, spare-transmitters may also be presented for inspection.
- 8.7.5. When a car or a transmitter does not comply with the rules, changes may be carried out before presenting it for final admission.
- 8.7.6. Cars which have passed Technical Inspection must be marked with the drivers identification number, consisting the registration Entry number. This number must be applied, indelibly, inside the chassis plate.
- 8.7.7. For each competitor the race has officially started after technical inspection and admission of his car.
- 8.7.9. At European Championships, all cars of finalists go into a "Parc Fermé", immediately after the finish of the final and are inspected. Cars must remain with the Officials, untouched by drivers or mechanics. Any race distortion must be ignored. Inspection must be at least on:
- engine (motor)
 - tank capacity (batteries)
 - battery-pack and weight
 - chassis (dimensions)
- 8.7.10. Point 8.7.9. may be applied at EFRA Grand Prix or other EFRA sanctioned races, but is not compulsory.
- 8.7.11. The marked part of the car, normally the main chassis, may be changed. This would be subject to any technical criteria detailed within each Section. The original marked part must be left with the organisers until racing has finished (unless officials decides otherwise).
- 8.7.12. If a car is found to exceed the limits of dimensions on checking immediately after a race positive proof of race damage may prevent disqualification.
When a car failure to pass the technical inspection, the driver is only disqualified from the heat. In a final, or sub-final, it will mean last position of that final.
- 8.7.13. The car shall be measured for width, length and height using equipment as detailed in each Sections Technical rules. The equipment should be constructed preferably from metal, or alternatively from high quality board suitably stiffened to prevent distortion.
The car must freely fit such equipment with any steer able wheels set in the straight ahead position, and comply with any maximum dimensions due to suspension movement that may exist in the Section rules.
The measurement of the wheelbase may be made by simple measurement of axle centre distances with suspension in any position but Race Directors should be prepared to make more exact checks in cases of doubt or protest. If is suggested that the wheels are removed and the wheel spindles are firmly placed on the blocks whilst accurate measurements are made.

8.7.14. The equipment used for technical inspection by the organiser must be made available to competitor's at all reasonable times.

8.7.15. All lists of approved equipment, (i.e. Bodies, mufflers and batteries) must be available on EFRA's webpage from the 1st of March every year. This is the finale lists for this year and no changes will be made before the next year. Equipment homologized during the year will not be put on the list until 1st of March next year

8.8. TEAM MANAGER MEETING

8.8.1. A Team Managers Meeting must be held prior to each race and per class. It must be held in English.

The Race Director must call the meeting, Team-managers, Referees and other Officials must be present.

8.8.2. Team Manager meeting have to be completed at least 1 hour before the start of the first timed practice and the following points must be covered as a pre-race briefing:

- security and safety items;
- starting procedure, explanation;
- disciplinary questions;
- other items concerning the contestants;
- changes in the organisation or procedures;
- presentation of the main Officials and Referees.
- details of the penalties that may be awarded and the circumstances that they will be awarded under.
- details of the number of mechanics etc. authorised to enter the pit lane during racing.

Team managers are links to distribute this info to their respective drivers

8.9. FLAGS

8.9.1. The use of the following flags is compulsory:

Starting flag: the national flag of the country where the race is held.

Finish flag: chequered flag.

Black flag: the car in question must immediately stop in the pit to receive instructions.

8.9.2. The use of the black flag by the Referee (see 7.1.8.-9.):

- drivers who impede the progress of other participants;
- unsporting behaviour;
- participants driving in a manner deemed to be dangerous.

8.9.3. The use of the black flag by either the Referee or the Race Director (see 7.1.12.-13.):

- Vehicles judged to be in an undriveable or dangerous condition; after repairs have been carried out and after the Race Director or the Referee have approved the repair, they may continue their race;
- Vehicles which loose their bodies or other parts must immediately stop and carry out the necessary repairs after which they may re-start.

8.9.4. The black flag is operated by the Flagman (Starter), who receives his instructions to do so from either the Race Director or the Referee.

Under no circumstance may he use the black flag on his own authority.

8.9.5. Not response to the black flag within 2 laps will lead to disqualification of the concerned participant

8.10. PENALTY CAUSES

Time penalties should be awarded as stop and go penalties where possible. The Referee and/or Race Director should inform the driver, should be announced

through the sound system, and the driver should bring the car into the pit lane in the immediate next lap where it will stay the amount of time that the race organiser have decided depending on track layout. The time should be announced at the Team Managers Meeting. It will not be allowed any repair or refuelling until the Referee and or Race Director allows him to proceed.

In the case that there is no possibility to call a driver for a stop and go penalty, the Referee and or Race Director will announce a time penalty of 10 seconds (Large scale: 1 lap).

8.10.A Penalties in time, laps or even disqualification issued by EFRA Referee:

8.10.1. Unsporting behaviour (see 7.4.);

8.10.2. Deliberate corner-cutting;

8.10.3. When a car is re-entering the race other than from the point at which it left the track (not in case the engine has stopped and has to be re-started. Then the car re-enters the race from the pits);

8.10.4. When repairs are made to the car other than in the pit area off the track;

8.10.5. If the car is pushed over the finish-line (must finish under its own power);

8.10.6. Not returning to the pits after finishing a race;

8.10.7. Driving in the opposite direction of the race direction at any time.

8.10.B Penalties in time, laps or even disqualification, issued by the Race Director:

8.10.8. If orders of Race Officials are not obeyed;

8.10.9. If acting contrary to the EFRA Rules;

8.10.10. If a driver changes his complete car for whatever the reason;

8.10.11. If a driver changes his frequency without permission of the Race Director;

8.10.12. If a driver does not return his transmitter to the transmitter impound immediately after the finish of the race;

8.10.13. Fixed penalties in time or laps may be issued by the time-keeping Official in case of early starts (see starting procedures);

8.10.14. The bad behaviour and deportment of any competitor or assistant person to a competitor during the whole event, which could injure the image of the sport, may become subject to National or International (EFRA) sanction;

8.10.15. All Warnings and penalties must be noted on the result sheet and on the result board for the drivers (preferably in red).

8.10.C Drugs

8.10.16. If drugs or alcoholic impacts a competitor, competitor mechanics or an Official, the penalties for a competitor will be immediate disqualification. An official and competitors mechanics will immediately be taken out of service.

8.10.17. EFRA is given the authority to investigate and sign the WADA (World Anti-Doping Agency) Anti-Doping Code, and report back to the next AGM. All members of EFRA and all drivers participating in any EFRA-sanctioned race, are under those rules. It's the members and drivers own duty to know the rules.

8.11. PROTESTS

8.11.1. Only drivers participating in the race may enter a protest.

8.11.2. At European Championships a protest can only be made through the Team Manager.

8.11.3. Protests may concern:

- the Organisation (act against the rules);

- Officials (act against the rules);

- Results (only when proof can be presented showing the result is wrong);

- Other competitors (acting contrary to the rules to the disadvantage of the one entering the protest or the one the Team Manager is representing).

- 8.11.4. Only written protests, handed over to the Race Director within 20 minutes after the publication of results of the heat or occasion to which it concerns, will be considered.
- 8.11.5. 100 € or equivalent in the host countries currency has to be paid to the Race Director, on behalf of EFRA, who will only then accept the protest.
The time of receipt of the protest must be recorded.
- 8.11.6. The protest must contain relevant information for the Race Director to be able to discuss the protest and decide.
- 8.11.7. The Race Director together with either the Referee(s), the Timekeeping Supervisor or the International Jury, will deal with the protest and decide.
- 8.11.8. The decision must be made within 30 minutes after the acceptance of the protest. Only for important reasons and when the International Jury has to meet, may the decision be delayed to 60 minutes max.
- 8.11.9. When a protest concerns semi- or finalist, either the decision must be taken 10 minutes before the start the latest, or the start must be delayed until 10 minutes after the decision.
- 8.11.10. After the final race, there will be a “protest period” of 10 minutes after the provisional results have been published in writing on the score-board.
For this purpose, the publishing time of the provisional results must be noted down on the result-sheet.
During these 10 minutes, protests against the results may be presented to the Race Director who will then act according 8.11.7 and 8.11.8.
If no protests are presented within the 10 minutes “protest period”, the provisional results become official and final and may be announced.
- 8.11.11. Appeals to EFRA against the decisions of the International Jury may only be made if submitted to the Race Director in writing with a further appeal fee of 500 € (or equivalent) before the end of the event.
Appeals are only allowed against decisions of rule interpretation or of decisions made by the international jury after protest and not the fact of rules (see rule 7.4.6).
In cases where the international jury has adjudicated in cases of protest the decision of the jury is maintained until the appeal is considered.
In cases where the international Jury has made an interpretation of the rules the decision is suspended pending consideration of the appeal.
Appeals against the decision of referees shall also be made in writing to EFRA (see rule 7.1.22) and will not alter or interfere with the race in progress and will not suspend any decision of the referees.
Appeals to EFRA must be considered at the next Executive committee meeting or before the next AGM and are always to be considered as final.
- 8.11.12. If protest is upheld, the protest-fee of 100 EUR must be remitted immediately.
- 8.11.13. The Race Director may, without a protest being made, correct results which he may deem necessary, after consultation with his organising staff and referees.
- 8.11.14. Protests against the decisions of the Referee, concerning the racing, are not possible. The Referees decisions are indisputable (see 7.1.21 and 22).

8.12. LAP COUNTING PROCEDURE

- 8.12.1. During EFRA sanctioned events the lap counting is to be done automatically by means of an automatic lap counting system and transponders fitted inside the cars bodyshell.
The transponders must be available from the organisers free of charge.
If the transponders are delivered by the organiser for the whole event (eg:

Personal transponders types) a deposit of maximum 80 Euro may be required by the organiser.

If a driver owns a transponder which is compatible with the lap counting equipments and Race management software he may be entitled to use it by the organiser.

- 8.12.2. The hand-out transponders are released by the organisers at least one heat before the respective heat.
- 8.12.3. The fitting of the transponders inside the cars bodysHELLS remain the responsibility of the driver.
- 8.12.4. If a driver loses the transponder during the race, or if a transponder is not working, the lap counting supervisor must try to counts the laps manually.
- 8.12.5. If a driver forgets to fit the transponder during the race, the Race Director and the lapcounting supervisor will decide whether the laps are counted or not. There is no appeal against their decision.
- 8.12.6. Transponders must be moved to a better position in the car on the race-directors instruction, if lapcounting problems occur. Failure to comply may result in lost laps.
- 8.12.7. It is the responsibility of each competitor to ensure that no parts of his racing-equipment generates any form of signal that in any way interferes with the automatic lap counting system. If it is proven, that interference is being caused, the Race Director must instruct the driver to modify the offending item and if this does not prove possible, the driver will be excluded from the racing.
- 8.12.8. The result of a heat, subfinal or final should consist of the number of laps and the time of the last finish line passing in minute, seconds and 100 of seconds.

8.13. PRIZES AND PRIZE CEREMONY

- 8.13.1. Immediately after the finish of the race and before the drivers leave the drivers rostrum, the unofficial winner must be declared for the public and a symbolic first place award is presented. This award must be returned to the organisers immediately after the unofficial ceremony.
- 8.13.2. Immediately after the official result is published, the prize-ceremony must be held.
- 8.13.3. Winners are not entitled to claim prizes by right.
- 8.13.4. Prizes must be announced in the race-program. The actual prizes must correspond with the prizes as announced.
They must be of a reasonable value according to the standard of the race.
- 8.13.5. Cash prizes or any other means of payment (paper tickets or coins of an obvious exchangeable value) are strictly forbidden.
- 8.13.6. Gifts not exceeding the price of an one-eight scale car kit may be given.
- 8.13.7. EFRA will award the first three drivers of each official European Championship with a golden (first), silver(second) and bronze (third) medal.
- 8.13.8. The best driver under 17 years will also receive EFRA awards.

8.14. PRIZE MONEY

- 8.14.1. Under prize money we understand not only the prize money handed to the drivers and determined by the result they achieved at the end of the race, but also starting premiums and subsidised travelling and hotel costs.
- 8.14.2. A Sanction Fee should be paid to EFRA of: see General Rules 3.5.7.
- 8.14.3. The amount of prize money should be spread over at least 10 drivers participating.
- 8.14.4. No prize money allowed in European Championships or EFRA Grand Prix, only in promotion races ("Pro-races").

- 8.14.5. Applications to EFRA Sanction for prize money “Pro-races” should be made giving the proposed amount of prize money and sent to both the President and Secretary of EFRA.
- 8.14.6. Each “Pro-race” will be run under EFRA rules and watched by two EFRA officials who will be responsible for Technical Inspection, overseeing the accuracy of the results and providing experienced senior referees.
Two EFRA officials will therefore be nominated for “Pro-races” for these purposes, their expenses will be paid by the organiser from the prize fund.
The race format is free, open to be settled by Race Director and sponsor.
- 8.15. MARSHALLING**
If a host club is not able to provide marshals the following rules take effect:
- 8.15.1 Only drivers taking part in the competition may and must marshal the heat following their own, (subject to 8.15.4). The first heat will be marshalled by the drivers of the last heat.
- 8.15.2 Failure to marshal or provide a competent substitute will result in the loss of the driver’s best qualifying time if qualifying by fastest time is in operation. The loss of the best points score will be the result if qualifying is by the round by round system
A substitute marshal is only allowed if the driver is physically disabled and must be notified to the Race Director.
- 8.15.3 The organisation of drivers marshalling for the finals will be the responsibility of the organiser. Only drivers taking part in the competition may and must marshal finals unless a substitute is allowed by the Race director due to physical disability.
- 8.15.4 The organiser must provide a marshal for any unfilled position i.e. previous heat had less drivers or marshals missing.
- 8.15.5 It is the Team Manager’s responsibility to ensure drivers marshal finals. Country allocations will be reduced pro-rata.
- 8.15.6 For large scale racing Marshals are not allowed. Mechanics will act as Marshals out from the pit lane. This rule can not overrule national insurance regulations.
- 8.15.7 Marshalling must be from marked points about the track, if safety equipment is provided (e.g. tabards) it is the marshals responsibility to use it and it must be properly secured.

9. STARTING PROCEDURES

- 9.1. Purpose of the EFRA qualifying system is to create more equal chances for the drivers.
- 9.2. Starting procedure for qualifying
It can be either:
- Staggered Start: All cars are released one by one by the starter at an interval of approx. 1 second (track lay-out depending). Missing the starting procedure means that the car has to start his race from the pits after the last car has started from the designated starting area.
 - Flying Start: Cars will be driven at the track from the moment the track is declared "Open" for practice or warm-up, there will be no call for starting procedure. The Race Director will give a 2 minutes warning to the start, this will be announced through the sound system, you will also get the time "1 minute to the start", "30 seconds to the start" and "10 seconds to the start". An audible signal and the mention "clock is running" will indicate that the heat has started. During this procedure timing cant be adjusted.
Common conditions: Each car will have its own timing. The total time will be the one designed in each class appendix and will start when the car pass for the first time over the starting line.
- 9.3. Timing/counting starts for each car separately the first time that car passes the start-line. Actual start therefore has to be a few meters before the start-line.
- 9.1.4. The antenna of the timekeeping computer has to be installed in the track before the entrance of the pits.

10. RULING

10.1 PRECEDENCE

- 10.1.1 As long as appendix rules concerning specifications and race procedure do not clash with EFRA's spirit regarding fair racing they take precedence over the general rule governing the same item.

APPENDIX 1

1/8th SCALE IGNITION TRACK CARS

1. ALLOCATIONS FOR EUROPEAN CHAMPIONSHIPS

- 1.1. The allocations for the EFRA European Championships 1:8 scale will be established by the section meeting and published in the minutes.
- 1.2. For allocation and re-allocation procedures see 3.6. and 6.2.
Allocations will only be offered for EC and WC events to those member countries that have written to request places.
- 1.3. All countries receive re-allocated places in the order of the Allocation-list, unless stated otherwise in this list.
- 1.4. The number of entries for EFRA European Championships is 120 with a maximum of 150. Accommodations for at least 120 drivers must be available. If the number of entries exceed 120, the accommodation must be sufficient for all participants.
- 1.5. Applications for all EC's must be done in writing by using the applications forms to be presented at the annual AGM section meeting

2. RACING FORMAT EFRA EUROPEAN CHAMPIONSHIPS AND GRAND PRIX

- 2.1. European Championships are held in following classes:
 - a) The European Championship Sportscars/GT-P/Group-C will be held on the 4th weekend of July. In the year there is an IFMAR World Championship outside the EFRA bloc than dates between EC and WC must separated with at least 4 free weekends between the finals.
In the years there is an IFMAR WC in the EFRA bloc there will be no EC-A (see schedule IFMAR, next WC 1:8 IC track will be 2009 and 2017)
It will be open to EFRA "A" and "B" licensed drivers. EFRA "A" licensed drivers should have preference.
One special EFRA medal will be awarded to the fastest driver under 17 year. So everybody of 16 years during the race dates, or younger can compete for this medal.
 - b) The B-European Championship will be held on the last weekend of May and will be open to:
EFRA "B" licensed drivers 1:8 scale IC track.
EFRA "B" licensed drivers 1:10 / 200 mm IC track (If accepted from 2007 on)
Not allowed to drive are furthermore: Top 10 from previous years EC 200 mm Electric, IC track 200 mm, Large scale, Off-Road 1:8 scale, Electric Off Road and EC-B.
Participation in this event will not effect the ranking list. The winner of this championship will be EFRA "A" licensed immediately after this race. At this event the same body as the EC-A will be used.
One special EFRA medal will be awarded to the fastest driver under 17 year. So everybody of 16 years during the race dates, or younger can compete for this medal.
 - c) The EFRA ranking list is based on the last 2 EC's, the last WC and the best result of one GP in the past year. An EC result is the result of the Sports cars/GT-P/Group-C EC from July. The total result of this list will decide upon A and B licence at the end of the season. For all the races involved in this

- ranking, points can be achieved for the result after the finals (see points table section 3.3.6) and 50 % of those points for the result after the qualifications. Both results will be added together for the racing. During qualification A and B licensed drivers must be separated in different heats.
- d) European Championship 1:8 track 40+/235mm 1:10th (open)
 EC 40+: Open to all drivers of 40 years, including those who become 40 that year and older.
 EC 1:10th 235mm (this last Class will be open to drivers between "10 and 70")
- The allocated dates of the A-drivers EC and that of the B-drivers Championship may be exchanged by simple majority vote at the AGM in the years that a World Championship is being held.
 - Allocations and reallocations procedure will be fixed at the AGM's section meeting.
 - The format of EFRA GP's could be the same as for EC's but may be shortened up depending on the number of entrants.
- 2.2. Free practice for E.C. is only allowed from Monday preceding the Race. It will not be allowed to practice for participant's 10 days before this Monday (see also 8.1.). However pitlane refuelling may be forbidden during free practice at EC if it is necessary to facilitate a quicker turn-around of drivers (every five minutes).
- 2.3. Free practice for Grand Prix events must be allowed at least from Friday preceding the event (see 8.2.).
- 2.4. General Qualifying format for EC's and GP's: Minimum 4 and Maximum 6 series of 5 minutes heats depending on the number of drivers.
- If there are 60 drivers or less, 6 rounds.
 - If there are >60- <80 drivers, 5 rounds.
 - If there are more than 80 drivers, 4 rounds
- With everybody qualifying for Christmas tree sub finals and 1-4 qualifying directly for the final. Depending on time available at Saturday all finals higher than 1/64th will be shorter than 20 minutes (for instance 10 minutes). See also 2.6
- 2.5. Time Schedule
- The time schedule should not be rigid but adapted to the number of entrants. As a guideline at EC's with 120 or more entrants the schedule should be as follows;
 - Monday - Thursday free or controlled practice.
 - Thursday and Friday Technical inspection.
 - Friday controlled practice and 1st series of qualifying in the afternoon.
 - Saturday round 2 till 4. Lower finals till 1/64.
 - Sunday 1/32 finals upwards, practice main final direct qualifiers, minimum 10 minutes, maximum 20 minutes between 1/8 and 1/4 final. Final.
 - The race director should configure the heats based on the EFRA ranking of the previous year. The heats shall contain a maximum of 10 drivers. These practice heats will be of 10 minutes of duration. The schedule of all practice heats including each practice heat starting time will be carried out by the organisation of the event and it should be given to the Team Managers & published for general knowledge.
- 2.6. General sub-final and final formats for EC' and GP: The sub-finals are 20 minutes up till 1/64th finals. Time for all finals higher than 1/64 to be set at team

managers meeting. The duration of the final is 45 minutes, the best 3 of each sub-final move up to the next final.

Following the semi-finals the best 2 of each semi-final move up to the final, plus the best 2 remaining drivers from the 2 semi-finals combined.

When racing conditions are wet in the 2 semi-finals, the best 3 of each semifinal move up to the final.

After the first semi final the first 5 cars will be put in Parc Ferme in Technical inspection and they will be released after completion of the technical inspection of the 2nd semi-final. This will give all drivers that proceed to the main final equal time for preparation.

In case of wet conditions, the above mentioned first 5 cars of the first semi-final, may be cleaned with compressed air before they are put in Parc Ferme in Technical Inspection. Cleaning of cars should take place under control of the Technical Inspection Staff.

Starting order for the drivers who moved up to the final is based on number of laps and time.

In different circumstances it will be number 1 from the A-final who gets the number 5 and the number 1 from the B-final who gets the number 6 etc. Sub-Final "B" "even" is the first final to start on the Saturday afternoon.

2.7 Frequencies for semi-finals and finals are not published and must remain secret. The Race Director will allocate frequencies to the drivers personally after they have proposed to him 2 or 3 different frequencies. A radio check must be made before the start of the final.

2.8 During qualifying heats only 1 mechanic is allowed in the pitlane. During subfinals and finals 2 mechanics are allowed.

2.9 Marshalls for EC's and GP's are not compulsory. During the Qualifying the drivers must marshal the heat following their own. The first heat will be marshalled by the drivers of the last heat. The organising club must provide Marshalls for the finals. They must be experienced and supplied with gloves and/or other protection. No other drivers or mechanics will be allowed as Marshalls. No other persons, except officials are allowed on the track whilst racing is in progress.

Failure to marshal or provide a competent substitute will result in the loss of the driver's best qualifying time if qualifying by fastest time is in operation. The loss of the best points score will be the result if qualifying is by the round by round system. A substitute marshal is only allowed if the driver is physically disabled and must be notified to the Race Director.

2.10 The organiser must provide a marshal for any unfilled position i.e. previous heat A ranking system will be made based on the GP results, 2 worst results can be taken out, to define a Pro-Open ranking. This is no official EC series, but will be called, Pro-Open "year".

3. TRACK SPECIFICATIONS

3.1. Track surface should be unsealed asphalt or coarse finish with any joints smoothed.

3.2. Minimum length must be 200 metres (advised 240-300 mtr.).

3.3. Minimum width of the track will be 4 mtr. between marking lines. The maximum width is 6.50 mtr.

The marking lines must be 8-10 cm wide and either white or yellow. They must be approximately 20 cm away from the edge of the racing surface.

- 3.4. Maximum distance from the middle of the drivers rostrum to the furthestmost point of the track must be 60 metres.
- 3.5. Vision: no obstacles may interrupt the vision from the drivers rostrum to any part of the track.
- 3.6. A broken line may be drawn in the middle of the straight to aid vision. No lines may be drawn in corners other than the marking line.
- 3.7. The refuelling and pit area should be clearly distinguishable from the main track and as close as possible to the drivers rostrum. Exit from and entrance to the main track is advised to be on a slow part of the track.
- 3.8. Track design must include both right and left hand turns and must have a straight of minimum length 45 metres.
- 3.9. Outside barriers must provide a positive means of stopping a car which misses a corner or runs out of control. The primary consideration for selection of the outside barriers shall be the protection of the spectators and not the cars.
- 3.10. Inside barriers must deter corner-cutting and prevent cars reaching other parts of the track. Inside barriers must be positioned and dimensioned to prevent cars from flying over the outside barrier into the public enclosures.
The barriers must be smooth. When cones or dots are used, they should not be higher than 5 cm.
- 3.11. Barriers must be a minimum of 20 cm. away from the marking lines on the track.
- 3.12. The inner and outer surrounds to the track must be of grass or other suitable materials such as concrete. The object of these surrounds is to slow down any car that leaves the racing surface. The car must be able to leave the infield or outfield on their own to minimise the need for Marshall's assistance.
- 3.13. Marshall posts must be positioned at 30 mtr. intervals around the track. They may not obstruct the vision of the drivers.
The posts must be numbered. When a post is located at a dangerous part of the track (i.e. the straight or a fast corner), this post must than provide protection for the Marshall (a wall, tires, a gate etc.).
- 3.14. A start/finish line must be painted across the track, preferably in front of the time keeping position.
The first start line box must be located more than 10 mtr. away from the following corner.
- 3.15. For Le Mans type of starts, 10 numbered boxes will be located on the edge of the track, at an angle of 20-45 degrees to the track, minimum 3 mtr. apart. The boxes must be 70-100 cm long and 30-40 cm wide..
- 3.16. Formula 1 Grid Start.
The grid will be painted on the track.
The invitations should specify that the Formula 1 start will be used.
The grid will be painted on the track, preferable on the straight
Two rows of numbered boxes will be located on the track with approx. 1.5 - 2 m space between each row. On one side number 1, 3, 5 etc on the other side 2, 4, 6 etc. No. 1 stands 2 m in front of No. 2, No. 2 stands 2 m in front of No 3 etc.
- 3.17. Race Directors must use the staggered starting system (see general rules 9.).
- 3.18. Race Directors and referees involved in EFRA sanctioned events may be invited to a briefing meeting covering interpretation of the rules and management of international races, so that they feel confident to manage a good race.

4. RACE PROCEDURES 1:8

(see also General Race Procedures Chapter 8). The arrangements of the heats and the numbering is left to the discretion of the organiser, with the faster drivers (A-license) running in the last heats.

The drivers must stand adjacent to their numbers on the rostrum, the mechanics must remain in their boxes along the pit lane.

For all finals, drivers with the lowest starting numbers may choose their position on the rostrum and the mechanics must stand under the driver where this is possible.

-1 There must be a 3 min. gap between the end of one heat and the start of the next heat.

Also a minimum of 2 minutes must be allowed between the issuance of the transmitters and the start of the heat.

-2 An audible warning will be given at 1 minute and again at 30 seconds prior to the official start, in English and other languages as appropriate.

-3 From 30 seconds till 3 seconds the cars must be hold at the starting boxes. If a car is not at the starting box at 3 seconds due to unforeseen problems the car may start from the pitlane after other cars have officially started. The race director and referees will monitor for the abuse of this facility.

-4 For all finals, from 10 seconds until 3 seconds prior to the start a second by second count-down will be made in English.

-5 In case of LeMans or Formula 1 Grid Starts at 5 seconds prior to the start, the Starter will lower the starting flag and at 3 seconds the flag will be fully down.

At this point, all cars must be released by the mechanics, who will all step back 1 meter.

The cars must remain in the boxes, no part of the car touching the starting line.

-6 From 3 seconds the verbal count down stops and the actual start-signal will be given by the Starter after a period of between 0 and 5 seconds has elapsed.

If the grid is not to the satisfaction of the Starter, he may require a re-start, re-commencing the count down from 30 seconds.

-7 The official start signal will be audible by means of a hooter, operated by the Starter.

This signal will also start the Timing Systems.

-8 Early starts, (i.e. any part of the car touching the starting line) will be penalised with a "STOP and GO" penalty. The time for this "STOP and GO" has to be set at the team managers meeting before the actual race starts and will have a maximum of 10 seconds.

This penalty is issued by the Starting Official, Race Director or the Referee and must be announced immediately after the start. The penalty will be marked on the result-sheet.

-9 Under no circumstances will the race be stopped due to a jump start.

-10 The Starter may only interrupt the race and make a re-start in the event that he considers the starting procedure or the start was not carried out correctly.

-11 Delayed start.

As long as the starter has not called 30 seconds (the trial lap, see 4.3 is part of the procedure after 30 seconds) the cars to the start line, any participant of the semi-finals and final may request a delay of 10 minutes to carry out

repairs on his car. This delay can be granted only once for each semi final and the final.

- the track is closed, if the delay is requested as a result of frequency or radio problems
- the track is open, if the delay is requested for mechanical repairs or problems.

Any driver asking for a delay will start from the end of the grid (11th position to be painted on the track) or from the pitlane in case he is not in time at the grid.

4.2. STARTING PROCEDURE OF HEATS

Starting for qualifying heats will be from the start line using staggered start - one by one in the following order:-

Round 1 1,2,3,4,5,6,7,8,9,10

Round 2 4,5,6,7,8,9,10,1,2,3

Round 3 7,8,9,10,1,2,3,4,5,6

Round 4 10,9,8,7,6,5,4,3,2,1

Round 5 5,4,3,2,1,10,9,8,7,6

Round 6 8,7,6,5,4,3,2,1,10,9

4.3. Starting for Sub Finals and Final will be on a "Le Mans" type grid or a Formula 1 grid depending on the track layout, with the faster Qualifier starting in front of the slower. During sub finals and final, a trial lap is driven to avoid frequency problems and to check the transponders. Cars will be released one by one by the starter.

4.4. -1 All Qualifying runs and finals are ran by "time plus next-lap" system. Qualifying heats are 5 minutes duration, lower finals and semi-finals 20 minutes and final 45 minutes.

-2 When the time is over, an audible signal is given. A car finishes when it passes the finish line after the finish-signal is given. The car must immediately return to the pits and may not hinder other cars still racing.

-3 In case of doubt (on the finish-line when time is over), a car may race one more lap and finish. Whether he finishes or not when time was completed, is up to the Time-keepers and cannot be disputed.

-4 After returning to the pits, the engine must be stopped immediately and the transmitter turned off and impounded.

4.5. Qualification Order and Finals.

-1 After all series have been completed the Qualification order is established, by taking the best result of each driver.

-2 In case of more than one driver recording identical best results of qualifications the next best result is taken

-3 In the case of more than one driver recording identical results in a final, the driver starting with the higher start number is classified as the faster, e.g. if number 5 and 2 have equal times, 5 is deemed to have higher final placing.

-4 The sub-finals and final are run according to the schedule printed in the official race program, which may only be changed by team managers majority vote.

-5 After all sub-finals and final are completed a final result list is prepared based on laps and time, bearing in mind the sub final order. In case of rain see 4.6.

4.6. RAIN SITUATION

In case of different weather conditions during subfinals the final classification will be as follows: Place 4 of subfinal A and Place 4 of subfinal B will both be awarded place 11th equal in the general classification.

Place 5 of subfinal A and place 5 of subfinal B will both be awarded place 13th equal in the general classification and so on.

4.7. RACE INTERRUPTIONS

-1 In the case of a race which is interrupted for more than 60 minutes for reasons beyond the control of the organisers (bad weather conditions with safety risks for all persons at the meeting), the referees together with the Race-director will decide whether to cancel or continue the meeting.

-2 In the case of an interruption of a heat the entire heat will be re-run.

-3 In the case of an interruption of sub-final or a final the following procedure will be used:

A. If less than 10 minutes of a final has been run, the results will be cancelled and a new start given for the total time of the final. Vehicles may be repaired before the new start.

B. If more than 10 minutes of the final have been run, the results at the moment of the interruption will be kept. The new start will be given for the time which remains to complete the final.

The two results will be added to give the final and definitive placing. If the second start cannot be made for any reason, the results from the first part will be used as the final and definitive placing.

C. When the interruption takes place after 75% or more of the race is past, the results as at the time of the interruption becomes the final result.

At the moment of the interruption of the race, the drivers will leave their vehicles on the start-line under the control of the Race Director. They may switch off the radio and stop the engine. There will be no repairs carried out to the vehicle or changing of tyres. Any driver who does not observe this rule will be immediately disqualified.

4.8. RAIN PROCEDURE DURING QUALIFYING

-1 The Race Director and the Referees are jointly responsible for the decision to stop a race in the event of rain.

-2 On the result sheets the Race Director or the appointed official must mark a heat "WET" when the heat was raced under wet conditions. On the corresponding record sheets, this must also be marked.

The Race Director together with the Referees will decide in case of doubt. Heats are generally considered to be 'WET' when there is any rain or moisture on the track and it is obvious to the race director that the cars cannot perform to their maximum capability. The race director may decide to postpone qualifying if it is likely that qualifying can be resumed within reasonable time.

-3 When all drivers have had at least one dry heat, all results will be counted.

-4 When weather and time permits, the Race Director may decide to offer an extra heat to those drivers who did not have a chance to drive a heat dry (i.e. when most drivers had 2 resp. 3 dry runs, a 2nd. resp. 3rd. run may be offered to those who had only 1 resp. 2 dry runs).

-5 When not all drivers have had a chance to run a dry heat, only the wet results will be counted.

- 6 When continuation is judged to be senseless, or when other drivers should be offered a fair chance to drive under dry conditions, the Race Director together with the Referees may decide to end a heat or cancel a complete heat (4.8.1.)
- 7 When all drivers have had at least 1 dry heat, the race-director will postpone the qualifying until the track is declared fully dry again. If it is likely that this will interrupt the qualifying for more than 1 hour, the race director may decide to open up the track for controlled practice

5. TECHNICAL SPECIFICATIONS

All measurements referred in this appendix are minimum or maximum values. All measurements for the motor dimensions to be considered with 2 digits behind the comma, all other measurements to be considered 1 digit behind the comma.
Measurements must be within their maximum or minimum values under all Circumstances.

- 5.1. The engine may have a total capacity of not more than 3.50 ccm.
A maximum carburettor diameter of 9.00 mm.
- 5.2. The fuel tank including filter and fuel pipes up to the carburettor may hold a maximum of 125.00 ml. No loose inserts allowed.
Any tank found illegal (>125 ml) after a heat or final shall be removed from the car and inspected for a second time after an initial "cool down period" of approx. 15 minutes. This period of 15 minutes is only necessary in case the temperatures are above 20° C.
- 5.3. Overall dimensions:
 - Wheel base: 270.00-330.00 mm
 - Overall width max.: 267.00 mm
 - The maximum width of the body-shell is 267mm on top of the wing and stiffeners in the side of the body are not allowed.
- 5.4. TYRES:
Maximum width rear: 64.00 mm
Tyres must be black except for writing on the side-walls.
- 5.5. RIMS
The rim must not exceed 54.00mm + 1.00 mm tolerance diameter. An edge to reinforce the rim on the inside (carside) of 2.00 mm thickness and 3.00 mm height is allowed, flange diameter max. 60.00 mm. Any fixing bolts or other equipment installed in the wheel rims may not extend beyond the exterior of the wheel rim.
- 5.6. All vehicles must be equipped with brakes and a clutch in such a manner, that the vehicle may be held stationary with the engine running.
- 5.7. Each motor must be equipped with an exhaust system and an inlet silencer, to reduce the amount of noise generated by the car. Each individual car must not produce more than 82 dB, measured at 10 meters distance and 1 meter high. EFRA's definition of a noise level is always final.
Only EFRA homologated 3-chamber mufflers are allowed on EFRA sanctioned events. The EFRA homologation number must be engraved on the sidewall of the muffler.
- 5.8. The front of the vehicle must be equipped with a bumper in such a manner, that it will minimise a injury in the case of it enters into contact with other participants or members of the public.

The bumper must be made from a flexible material with all corners and sharp edges rounded off.

The contour of the bumper will follow the contour of the body with which it is being used.

At no point may the bumper protrude more than 5.00 mm in front and 13.00 mm on the sides of the body.

5.9. If a rear bumper is fitted it must finish not more than 50.00 mm behind the rear axle.

5.10. The aerial must be made from a flexible material.

5.11. Bodies must be a 1:8 scale in character reproduction of vehicles that exist or have existed in the last five years. There will be an allowance of 10% tolerance in all dimensions.

5.12. All EFRA sanctioned events will be raced with open/closed cockpit prototypes/sportscars/ canam type/GT-P's/Group-C or similar cars.

All lists of approved equipment, (ie. Bodies, mufflers and batteries) must be available on EFRA's webpage from the 1st of March every year. This is the finale lists for this year and no changes will be made before the next year. Equipment homologated during the year will not be put on the list until 1st of March next year.

5.13. The body must be made from a flexible material and be painted properly. When initially entered in a meeting the body must be neatly finished.

5.14. A realistic driver (minimum 3 colors) made to 1:8 scale must be fixed in the correct position in an open cock-pit cars. The windscreen and windows must be translucent (ie. Not completely painted in)

5.15. All bodies must have the front and rear wheel arches cut out if the original was so designed.

5.16. CUT OUTS

- the windscreen must not be cut out. One hole of max. 6.00 sq. cm for cooling is permitted

- side windows and rear windscreen may be removed

It is not allowed to bend windows to the outside

- all parts of the vehicle must be covered, except:

- a) cooling head of engine
- b) air filter
- c) aerial (max. 10.00 mm)
- d) outlet pipe of muffler
- e) fuel filler cap
- f) roll-over bar

Only if these parts are extending the body. Cut outs for above mentioned parts are to have no more than 10.00 mm clearance.

In addition to this, the following holes are allowed:

- g) for muffler outlet

- h) for fuel filler cap (50.00 mm maximum, round, viewed from above and not combined with the hole from the roll-over bar, or oval 40 mm x 60 mm maximum and not combined with the hole for the roll-over bar) Note: Hole for roll-over bar and fuel filler gap may not be combined. This rules refers to the GT-P/Group-C body.

In case of the Proto types or open cockpit cars a clearance of 10 mm around the fuel filler cap is allowed.

- i) for radio switch (max. 10.00 mm)

- j) glow plug (max. 20.00 mm)
 - k) fuel mixture valve (max 15.00 mm)
- 5.17. Specific body attributes
- a) Group C: Cars eligible for this class are those that have been used under "Group C" rules in the FISA Sportscar World Championship.
 - b) GT1/GT2-Cars: Cars eligible for this class are those that are or have been racing in FIA GT Class. This can be either GT1 or GT2 cars like McLaren F1, Porsche 968 GT1, Ferrari F40, Marcos etc.
The cut-out of the body at the rear is free after the rear axle, but rear lights must be fitted if the original is equipped with these.
 - c) GT-P cars, eligible for this class are those that are or have been racing in the FIA "GT-P" class (see Le Mans 1999), or the Petit Lemans Series in America.
 - d) Proto type CAN-AM cars, eligible for this class are those that are of have been racing in any official championship.

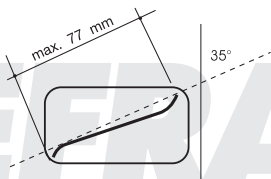
Homologation procedure; For all types of cars, the body shape behind the rear axle is not subject to control.

The outer edge of the wheels must be covered at the centre of the axles viewed from the top. All bodies must be homologated by EFRA.

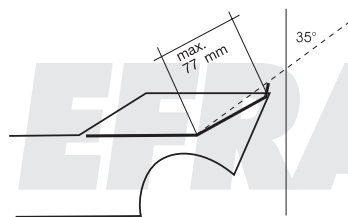
5.18. Wings and Spoilers

Whether build into the body or separate, they must have an angle of minimum 35 degrees measured on the vertical line inclusive of any added aerodynamic aids. If separate, they must have a chord of no more than 77 mm. Any added aerodynamic aids must have a chord of no more than 77 mm. All measurements for the wing height will be taken with the chassis grounded with a 10 mm spacer.

The angle is to be measured with a specific tool as follows:
separately mounted:



directly added:



The angle to be measured over a distance of 77 mm from the highest point of the spoiler or Guerney flap to the middle of the body.

You need a tool from which you can adjust the height and the angle.

The angle must be a minimum of 35° or bigger.

Maximum dimensions:

1) Group "C", GT-P cars

- max. width: 267.00 mm
- max. height: 160.00 mm (inc added parts)
- max. chord: 77.00 mm
- max distance behind rear axle: 153.00 mm

A single plane rear wing/aerodynamic aid need not be homologated. Any front

wing or multi plane rear wing must have an EFRA homologation number moulded into the shell. It may only be used with the shell of the same number.

2) GT1/GT2-Cars

max. width:	267.00 mm
max. height:	150.00 mm
max. chord:	77.00 mm
max distance behind rear axle:	153.00 mm

Single plane wings are only eligible for this class, they do not need to be homologated

3) Proto type Can Am Cars

max. width:	267.00 mm
max. height:	170.00 mm (inc added parts)
max. chord:	77.00 mm
max distance behind rear axle:	153.00 mm

5.19. Checks at the technical inspection

a) Before the race all cars will be checked and during the heats the following random checks will be made:

- weight limit
- muffler
- body and spoiler

The chassis is to be indelibly marked before the race and if a driver wants to change it, he must present the new and the old to the inspection officer.

b) During sub finals all cars moving up to the next final plus the next one are to be checked. In addition to the above mentioned checks the following are to be done during sub-finals:

- marking of chassis
- fuel tank capacity

c) The same checks must be made after the final for the top 4 places.

5.20. Fuel will only contain methanol, Oil/lubricant and nitro methane. The specific gravity of the mixture may not be more than 0.91. Based on normal oil percentages this will give a maximum of 25 % nitro measured by volume. Verifying will be done with a floater, called Nitromax 25.

5.21. 4WD cars can be used without any technical restrictions except those listed in Section 5. The use of separate front wheel brakes, except through transmission is also not allowed (locking of one-way bearing is allowed).

2WD cars are restricted to:

- Rear axle driven
- Gearbox with maximum 2 gears
- No front wheel brakes
- No gas filled shock absorbers.

Specifications of flat chassis cars:

- rear wheel propulsion only
- one engine (one cylinder, 3.50 ccm air cooled)
- brake on rear axle only
- no gear box
- no suspension, an articulated front end is allowed

5.22. The minimum weight limit of the cars:
2500 grams for 4 WD cars, 2400 grams for 2 WD cars.

The weight limit will be checked with the cars ready to race but with empty fuel tanks and with transponder. (personal or with battery)

The weight will be checked on a digital scale balance and can be done before the start of the heat, sub-final, final or after the end of either.

If the weight is found to be under the minimum weight the driver should be disqualified from the heat, subfinal or final.

- 5.23. The car shall be measured for width by placing it on a baseboard equipped with two side rails of 20 mm height spaced 267 mm apart, constructed in such a way, that the car can roll freely between them.

Base-board and rails must be constructed of high quality board suitably stiffened to prevent distortion. The car must roll freely between the side rails with any steer able wheel set in the straight ahead position without any part of the wheels, bumpers, body shell or any other part of the car touching the side rails irrespective of the compression or extension of the suspension.

The car shall be measured for length and height in a similar constructed bow of internal dimensions 637 x 267 mm for Formula and Sports cars and 610 x 267 mm for GT cars which includes provision for checking the maximum height.

Measurement of the wheel base may be made by simple measurement of axle centre distance, but Race Directors should be prepared to make more exact checks in case of doubt or protests. It is suggested that the wheels are removed and the wheel spindles firmly placed on V-blocks whilst accurate measurements are made.

It is the responsibility of the driver to ensure that his car complies with the regulation at all times, that it is on the track and the organiser may check any car for compliance with the regulations at any time during the race meeting.

If a car is found to exceed the limits of dimensions on checking immediately after a race, positive proof of race damage may prevent disqualification.

- 5.24. A roll bar may be fitted which must not project more than 30 mm above the cooling fins or roof, in case of, for instance a saloon car.

- 5.25. It is not allowed to use any electronic parts for "Traction Control and braking control (ABS)" which can control the power of the transmission by means of a feedback system.

It is not allowed to use any form of telemetry with active transmission.

- 5.26. All lists of approved equipment, (ie. Bodies, mufflers and batteries) must be available on EFRA's webpage from the 1st of March every year. This is the finale lists for this year and no changes will be made before the next year. Equipment homologized during the year will not be put on the list until 1st of March next year.

6. A & B LICENCE

- 6.1. To qualify for an "A" licence, a driver must be placed 1-30 in the EFRA ranking system. All other applicants will be classified EFRA "B" licensed. These drivers must be approved by their own National Association as having sufficient experience and skill to take part in an International competition.

World Champion will retain "A" licence for the next 5 years.

European Champion will retain "A" licence for the next 4 years.

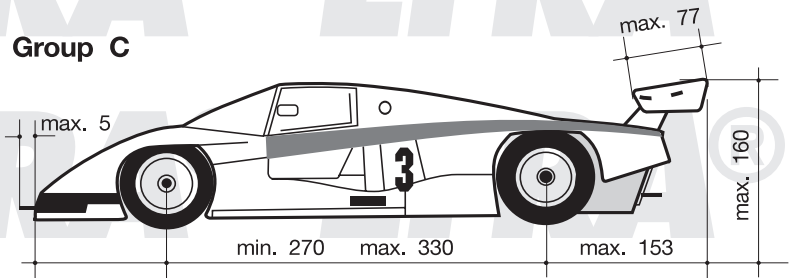
European Champion B-drivers will retain "A" licence for the next 3 years.

7. PENALTIES

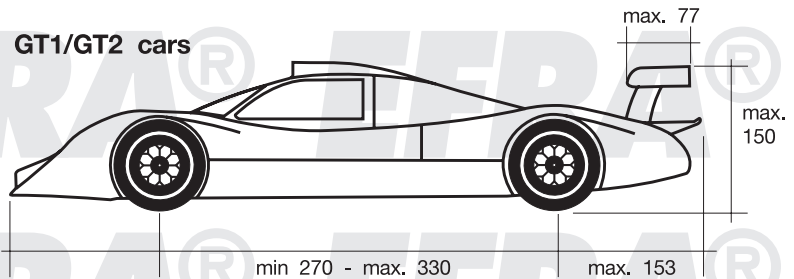
- 7.1. Referees must issue a verbal blue flag warning to slower drivers or to make drivers that are not within the same lap as the car that is about to pass him, to make way and not to obstruct the passing car. This warning must be announced "ATTENTION DRIVER (Name)"

- 7.2. Failure to respond to the verbal blue flag will result in an official warning and the driver must make a mandatory pit stop for 10 seconds. During this mandatory stop the Referee will administer the official warning directly to the driver. In the case that there is no possibility to call a driver for a stop and go penalty, the Referee and or Race Director will announce a time penalty of 10 seconds.
- 7.3. Any driver who is given 2 (two) official warnings will be immediately disqualified from the race in progress. After 3 (three) warnings the driver will be disqualified from the entire race.
- 7.4. Deliberate waiting for other cars will be treated as a verbal blue flag offence and a "Stop - Go" penalty issued. The Referee will advise the driver that his behaviour has been noted and that he should race normally. Failure to follow the Referees instructions will result in immediate disqualification. In the case that there is no possibility to call a driver for a stop and go penalty, the Referee and or Race Director will announce a time penalty of 10 seconds.
- 7.5. Deliberate obstruction of other cars in an attempt to influence the result of a race will lead to immediate disqualification and loss of his/her International Licence until after the next event of the same kind. (e.g. GP/EC/WC)

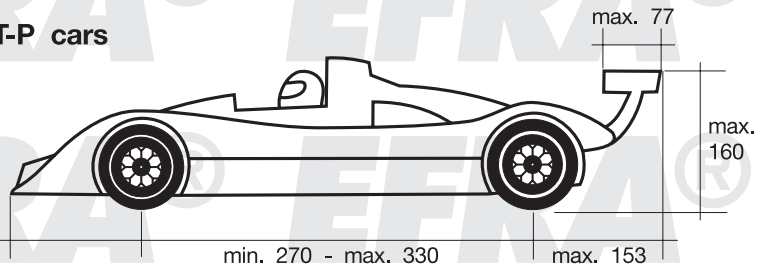
Group C



GT1/GT2 cars



GT-P cars



APPENDIX 2

1/8th SCALE IGNITION OFF ROAD CARS

1. ALLOCATIONS FOR EUROPEAN CHAMPIONSHIPS

- 1.1. The number of drivers and the National Allocations for the European Championships will be decided upon at the EFRA AGM annually. Accommodations for at least 130 drivers must be available. If the number of entries exceed 130, the accommodation must be sufficient for all participants.
- 1.2. For allocation and re-allocation procedure see 3.6. and 6.2.
- 1.3. If a driver has not registered by midday on the first day of the event, then this place will re-allocated unless that driver has contacted the organiser to explain his reason for not registering
- 1.4. A 4WD European Championship for B Class drivers may be organised each year. Entries will not be allowed for drivers who have ranked in the first fifty (50) places of the preceding two (2) 1/8th Off Road EC A Championships. To be run if possible the 2nd weekend of June.

2. RACING FORMAT EUROPEAN CHAMPIONSHIPS AND G.P.

- 2.1 The GP and the European Championship for B class drivers will have the same format as specified in the following rules adapted to a 3 day event with only four (4) attempts at qualification, only two (2) to count, weather permitting. Entries will be limited to 120 drivers and reseeding of the heats will only be done in case of clear necessity on the criteria of the R.D. and Referee.

2.2. QUALIFICATION HEATS:

- a) If the host country wants to, and the facilities can accommodate 180 drivers, qualifying rounds can be up to 15 cars. This decision will be made by the Section Chairman, the Referee and the Race Director no later than the GP prior to the event.
- b) Each driver should be entitled to a maximum of 5 attempts at qualification, weather permitting.
- c) Starting for qualifying will be with 'Flying start'. The track will be opened with a 3 minute warning to the start, this will be announced through the sound system, you will also get the time "1 minute to start", "30 seconds to start" and "10 seconds to start".

The announcement: "Clock is running" will indicate that the heat has started.

- d) All drivers will be entitled to a sub-final.

- e) Heats will be run in the following sequence for the 5 qualifying rounds:

Round 1: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

Round 2: 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 1, 2, 3

Round 3: 7, 8, 9, 10, 11, 12, 13, 14, 15, 1, 2, 3, 4, 5, 6

Round 4: 10, 11, 12, 13, 14, 15, 1, 2, 3, 4, 5, 6, 7, 8, 9

Round 5: 13, 14, 15, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

- f) Track repairs can only be carried out after qualifications and before the first Final unless it is for safety reasons with the agreement of the referee's.

2.3. TIMED PRACTICE SYSTEM

- a) The practice for drivers will only be run in the way of three rounds. 1st round 15 minutes duration and only the 2nd and 3rd practice will count for reseeding These rounds will be of 10 minutes duration with the last 5 minutes timed. Announced as rule 2.2. Results of the times practice will be published (laps and times). Points will be awarded according to the

result in each round. The best point results scored in these two rounds will be used to sort drivers by performance and to reseed them before the real qualifying rounds. After time practice and subject to frequencies and common sense the top 50/60 drivers will be place in the first 5 heats with equal number of each country up to a maximum of 4 drivers in each heat. The first 5 drivers take 1st place in the first 5 heat heats, next 5 in second place and so on. Use this system to include 130/180 drivers and avoid small teams being place in the same heat.

b) Only timed practice in heats must be allowed.

2.4. QUALIFYING SYSTEM

In each round drivers will score points based on laps and times achieved. For all rounds the maximum number of points given to the fastest driver will be equal to the number of drivers participating to the EC + 5 (five).

2nd fastest will score the maximum minus 2 (two) points.

3rd fastest will score the maximum minus 3 (three) points.

Down to the last position one by one.

If a driver has not completed a lap, no points will be awarded in that round.

In every, round in the event of a tie the points will be equally awarded to each driver and the first driver not tying will get one point less.

In the case of two or more drivers having the same points score the next best score determines position. If still unable to resolve with the next best rounds then driver with fastest laps and times will determine position.

Out of 5 completed rounds 3 to count

Out of 3 and 4 completed rounds 2 to count

Out of 1 and 2 completed rounds 1 to count

2.5 FINALS

All finals can be of 12 cars with 4 cars progressing to next final, and 6 cars from each semi final proceeding to Main A Final.

"A" series sub-finals will be composed of Odd places drivers following qualification. "B" series sub-finals will be composed of Even placed drivers after qualification. Every qualifying driver must progress to the main final in accordance with the accompanying Christmas tree. All sub-finals up to and including 1/128th A and B will be of 15 minutes duration. Then from 1/64th to Semi-final A and B 20 minutes, the final should be 45 minutes. The top 3 (three) / 4 (four) from each up to the quarter finals progressing to the next sub-final and the first 5 (five) / 6 (six) from each semi-final progressing to the Main Final.

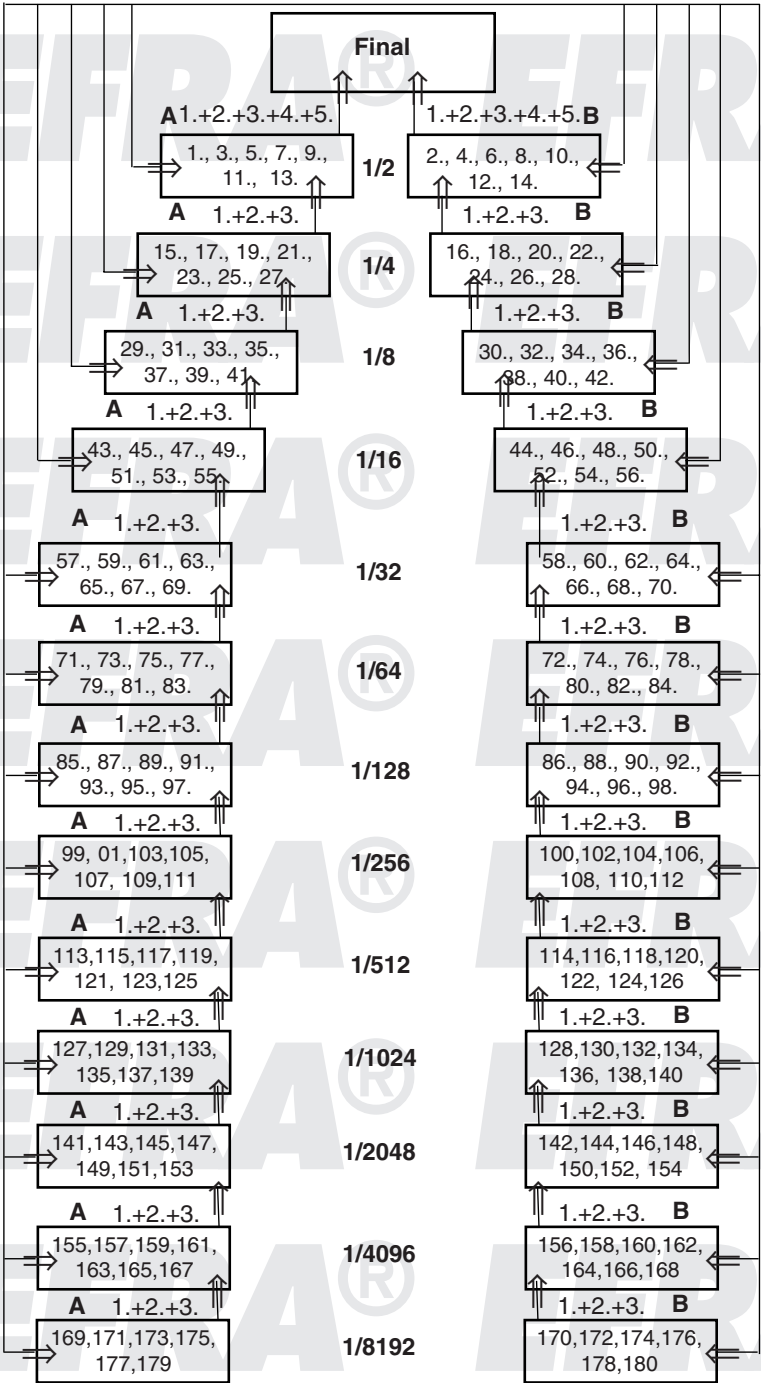
After the finish of the quarter finals each semi finalist ("A" and "B") is entitled to 10 minutes practice time with numbers and appropriate radio frequencies (See attached Christmas tree). If the first subfinal is 1/1024 or less then all subfinals will be 20 minutes duration.

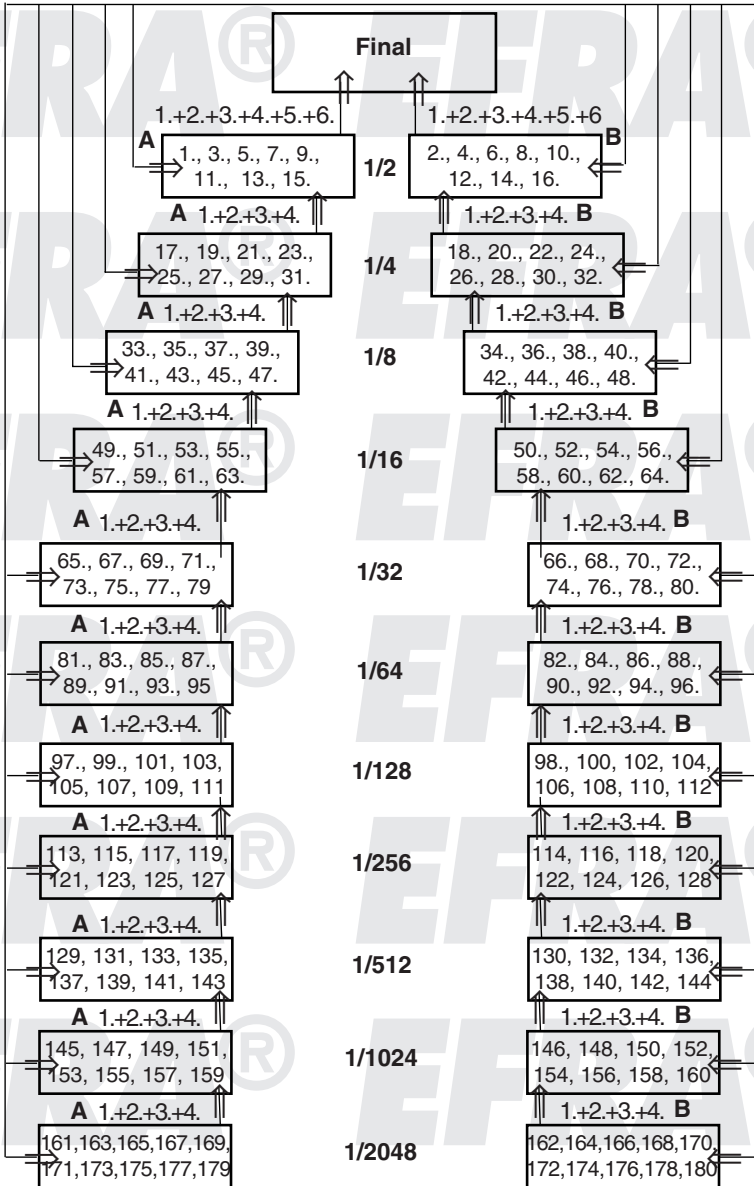
There will be a final for +40 drivers after the 2 semi finals and before the main final, length of that final will be 20 minutes. Drivers will qualify for that final according to their result achieved at qualification rounds, top 10/12 will have the right to compete at this final except those who have reached the semi finals.

2.6. TIMETABLE

The timetable for E.C. shall be as follows:

TUESDAY	A.M.	Registration & Technical Inspection
	P.M.	1 round Timed Practice (15 minutes)
WEDNESDAY	A.M.	2 rounds Timed Practice (10 minutes)
	P.M.	Reseeding of drivers from practice times.





Top 50/60 in 1st 5 heats
51/61 - 100/120 in next 5 heats
101/121 - 140/180 in next 4/5 heats
1 round of timed practice to sort out problems

THURSDAY 3 rounds qualifying
FRIDAY A.M. 2 rounds qualifying
P.M. 1/8192 Finals A & B (A is run first)
1/4096 Finals A & B
1/2048 Finals A & B
1/1024 Finals A & B
1/512 Finals A & B
1/256 Finals A & B
1/128 Finals A & B
SATURDAY 1/64 Finals through to "A" Final
Final to commence 15.30

Immediately after the finish of the Main Final and before drivers leave the drivers rostrum, the unofficial winner must be declared for the public and a symbolic first place award is presented. This award must be returned to the Organisers immediately after the unofficial ceremony.

Official Prize Giving/Reception/Banquet to be held after Main Final at a time to be announced by the Organisers. Banquet Tickets to be sold in advance.

3. TRACK

Minimum Width: 4 metres
Minimum Length: 250 metres

3.1 SURFACE

Artificial surfaces should be of the same type used for road construction.

They must not be potentially dangerous or pollutant.

Within the total length of the track 50 percent (50%) minimum must be from natural soil.

Any section made from artificial surface must not be longer than ten (10) metres.

A natural soil section must always separate two (2) artificial surface sections.

At place of the lap counting antenna, there must not be any metallic structure.

Deterioration of the natural soil area must not uncover obstacles in the transit area between natural soil and artificial surface (overlapping slope must be smooth and of sufficient length).

The track must be suitably drained.

3.2 JUMPS AND OBSTACLES

Their sizes must be in relation with the scale of the car.

3.3 SAFETY

Safety for everybody must be the most important aspect when designing a track and at every moment while race is on progress.

All non authorised people will have to leave the track area when the call 1 minute to start is given.

Press and media will be informed of this rule by the organizer when obtaining their press pass.

3.4 MAINTENANCE

The track surface may only be repaired at the end of qualifying.

The Race Director can authorise repairs, if he considers the track to be unsafe at any time.

4. RACE PROCEDURES

Race procedures shall be as for sections 2 & 3 & 4 - 1:8 scale racing cars (Appendix 1) adapted to the special characteristics of the off-road section.

Parc Ferme:

All cars of the the first semi-final will be impounded in parc ferme during the later semi-final. All cars of both semi-finals will be released at the same time. Delayed Start:

As long as the starter has not called the cars to the start line, every participant of the semi-finals and the final may request a delay of ten (10) minutes for repairs on his car. The delay will be granted only once for each semi final and main final. The track shall be closed to all cars during the delay period. The driver that asked for the delay have to start last from the startgrid (11th position).

4.1 The track for a European Championship MUST be either new or repaired new before the day it is open for practice. Wether the track is a new track made for the event or an existing track it can not be open to drivers for practice before the day the official practice is scheduled. The National Federation and the organising Club must forbid any use of this track 4 weeks before the event.

4.2 Unless the hosting club does not provide Marshals, Marshalling during practice and qualifying is done by the drivers, (only drivers participating must marshal due to insurance implications) who would marshal the race after their own and so on. For finals large teams provide the most marshals, maximum 2, smaller teams 1 and very small teams none. (But may volunteer to help) The marshal on designated points marked by their country names. Team Managers to insure that these points are covered at all times by drivers.

5. TECHNICAL SPECIFICATIONS

4 WD 1:8 OFF ROAD CARS

5.1. GENERAL DIMENSIONS

- a) Overall length 730 mm maximum
- b) Overall width 310 mm maximum
- c) Wheelbase 270 - 330 mm.
- d) Overall height measured from the ground including rollbar with full suspension compression 250 mm. maximum (this measurement does not include the receiver aerial).
- e) Minimum weight is 3 kg for 4 WD and 2,5 kg for 2 WD cars.
- f) No other function than steering and throttle/brake are allowed to be operated with the Radio Control by the driver. Any other electronic system placed in the car is not allowed.
- g) Wheel overall diameter must be between 75 and 120 mm.

5.2. ENGINES

- a) Internal combustion engines with maximum capacity 3.5 ccm.
- b) Fuel tank capacity: 125 ccm including all piping tubes and filter up to the carburetor.
The tank shall be measured using the official EFRA measuring cylinder or in the event of damage to the official cylinder, a cylinder to DIN standard.
- c) The capacity of the fuel tank must not be adjusted by insertion of any loose object.
- d) Any tank and fuel line up to the carburator found to be illegal (more than 125,00 ml) after a heat or final, shall be removed from the car and inspected for a second time after an initial "cool down" period of fifteen

(15) minutes. This "cool down" period is only necessary in the case of air temperatures above 20 degrees Celsius.

5.3. SILENCER

5.3.1 All cars must be equipped with mufflers, approved (homologated) by EFRA.

5.3.2 Each individual car must not produce more than 83 dB (A) measured at 10 meters distance.

5.3.3 EFRA may noise test any car at any time during the event

5.3.4 EFRA noise testing equipment will make all tests regarding noise levels. EFRA's definition of noise is final.

5.4. TYRES

All tyres must be black with the exception of side wall lettering, and the application of any additives is strictly forbidden.

No spikes, tubes or additional items intended to increase traction may be either glued to the outside of tyres or passed through tyres from the inside.

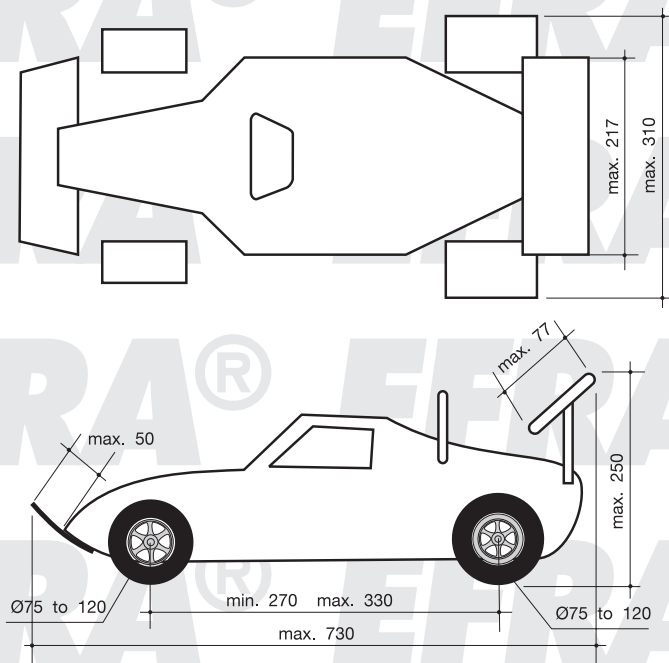
5.5. WINGS

A wing of maximum overall size 217 mm. length and 77 mm width may be fitted.

5.6. APPEARANCE

a) Cars shall be a reasonable representation of the style of car used for offroad, desert or trial racing.

b) Full bodysells of saloon style are permitted but may only be trimmed to expose a maximum of 50% of the tyres at full suspension depression. If such bodysells are fitted, provision for trimming shall be as in Section 5.6d.



- c) Where a roll-cage is fitted, an open wheel style bodyshell must be fitted underneath the cage so designed as to enclose R/C equipment and fuel tank with sufficient front and side areas to allow clear display of racing numbers.
- d) Openings may be cut in the shell for the antenna and the pipe ends and to allow access to fuel filler, switch, and engine adjustments, and a maximum of a third of the wind screen to assist in cooling the engine if not already opened by the fuel tank access.

Clearance around such items to be kept to a minimum.

"Acceptance of a saloon bodyshell by another EFRA Section shall be deemed to simply approval by the Off-Road Section for racing purposes."

5.7.

SAFETY

Marshals shall be provided with suitable protective gloves to minimise the risk of injury when coming into contact with the moving parts of the car.

2 WD 1:8 OFF ROAD CARS

5.8.

TRANSMISSION

- a) The car shall be fitted with 4 wheels.
- b) Power may be transmitted only via the Front or Rear wheels. Where there is the possibility of choice, the choice must be made before the Technical Inspection and the choice noted by the Controlling Official. Under no circumstances may the choice be changed during the race meeting.
- c) No Gear Box or alternative means of obtaining a variable transmission ratio between clutch and driven wheels may be fitted.
- d) Brakes may only operate on the driven wheels.

6.

NATIONS CUP

At every European Championship EFRA will hold a Nations Cup, with drivers competing as a team representing their countries. Before the start of the official qualifying rounds each Team Manager will provide the Race Director with a maximum of four (4) names of drivers which will represent their country at this Nations Cup. Out of this four drivers the best result in points according to their position achieved of three (3) of them will be added together and give the result of their National Team.

7.

TROPHIES

The organizer must furnish, at least, the following trophies for the prize giving ceremony:

- Appropriate trophy for positions 1-2-3 at the 3 standard classifications, Absolute final, under 16 classification and over 40 final.
- Trophy for positions 4-20 of the Absolute final classification.
- TQ Trophy, to be presented after classification is completed and returned for the final ceremony.
- 3 pairs of plates for the Mechanics of positions 1-2-3 of the Absolute final classification
- 3 set of 5 plates to the Nations Cup positions 1-2-3.

The Trophy of the Nations cup will be kept in deposit by the Winner national association and returned before the start of the next European Championship.

APPENDIX 3

ELECTRIC CARS

A GENERAL

1. RACETRACK SPECIFICATIONS for electric classes

- 1.1.1 For EFRA-sanctioned events, where non-permanent tracks are used, the track plans have to be submitted to the Section Chairman for approval.
- 1.1.2 Track-design must include both right and left-hand turns and one or more straights.
- 1.1.3 Minimum track length: 120 meters.
- 1.1.4 Outside barriers must provide a positive means of stopping a car that misses a corner or runs out of control.
- 1.1.5 Track marking equipment must be such a shape and size to prevent the entrapment of a car or the drivers view becoming obscured. 'Horizontally laid triangular column' shaped barriers and 'Bot dots' are not to be used.
- 1.1.6 Farthest point of the track must not be more than 50 meters away from driver's rostrum.
- 1.1.7 Time-keeping: preferable on a slow part of the track to enable accurate counting.
- 1.1.8 Marshall positions based on car numbers must be equally spread around the track. It should be clear which part of the track the specified position is responsible for.
- 1.1.9 A 220-volt electrical supply must be available at EC meetings with one outlet for every four drivers in close proximity to their pitting area. All safety precautions must be observed.
- 1.1.10 For the EFRA staggered start system one start line must be marked across the track, preferably close to the time-keeping's pick-up loop position (otherwise two).
- 1.1.11 All finals will use a "F1" type grid start on 2 meter alternating intervals with two rows of cars. Cars must be placed forward facing at 90 degrees to their markerline or startbox.
- 1.1.12 Wherever possible the start line(s) must be accessible without crossing any other part of the track.
- 1.1.13 The start line will be white or yellow coloured, have a minimum width of 5cm and shall cover the total width of the track and will also be marked on the barriers. There shall be marked boxes for the final F1 grid.
- 1.1.14 Top Qualifying driver may choose his starting position on the grid either left or right, this then to be the configuration for all remaining finals.
- 1.1.15 Marshall intervention must be minimised by using smooth obstacles such as dots or cones, of appropriated heights.
- 1.2. Specific track requirements for 1/12 & 1/10 Touring class tracks
 - 1.2.1 Indoor track surface must be needle carpet with smooth joints properly attached to the floor.
 - 1.2.2 For onroad racing, only smooth surfaces will be allowed.
 - 1.2.3 Indoor Limits: minimum track width 2 meters between the marking lines. At the start line the track must be at least 3 meters in width as far as the first turn. Marking lines must be either white or yellow, minimum width of 2.5 cm, and must be at least 20 cm away from the edge of the racing surface or track barrier.

- 1.2.4 The track surface for 1:10 Electric Saloon Cars can be both asphalt or needle carpet.
- 1.2.5 The track surface for 1/12th electric sports cars must be indoors on needle carpet.
- 1.3 Specific track requirements for 1/10 Off Road class tracks
 - 1.3.1 Width: 3 metres minimum but exceptionally may be 2,5 meters on parts within 10 meters from the rostrum.
 - 1.3.2 The spirit of scaled down off Road racing must be adhered to. (Modified On-Road tracks are not considered suitable).
- 1.4 Requirements for time-keeping equipment
 - 1.4.1 The main timing PC must automatically announce the following in clear English :
 - 2 minutes to the start of the race
 - 30 Seconds to the start of the race (& start order for staggered starts at this point)
 - 10 second countdown and start 'Sound' for line starts (i.e. finals)
 - 10 second countdown and call the cars off the line in case of staggered starts
 - Time calls and race order every 2 minutes
 - Cars finished & race over
- 2. **MOTORS FOR ELECTRIC SCALE CARS:**
 - All EC and GP events will clearly state which class of motors to be used.
 - 2.1 "SPEC' CAR MOTOR:
 - Rebuildable, 17X2, fixed timing of 5 degrees, Bushes (No Bearings), Maximum wire thickness is. 0,71 mm.
 - Armatures may be wound using the Mabuchi (star) or Sagami methods.
 - The armature stack must be solid with no cutouts, tri-rotors etc.
 - Armatures have to be either stamped with the wind by the manufacturer or can be 'tagged'.
 - Epoxy balancing of armatures for rebuildable standard or stock motors will not be permitted.
 - Tabs on the armature's commutator may only be "compression welded". No after-market welding, soldering or silver brazing will be permitted.
 - Brushes must be mounted in the 'upright' configuration (lay-down brushes will not be permitted).
 - No hybrid motors or mixing of parts from different models will be permitted.
 - No modifications to the physical construction of the motor can, end bell, or armature will be permitted (e.g. adding or removing material from the armature stack, relocating spring posts).
 - Any motor that shows any sign of tampering will be disqualified, the driver is responsible for any signs of tampering.
 - 2.2 "MODIFIED CLASS" CAR MOTORS
 - a) Brushed Motor
 - Specifications '05' sized displacements:
 - Can:
 - Can diameter to be a maximum of 36.02 mm. Overall length to be a maximum of 53 mm measured from the mounting face of the motor to the furthest point not including solder, tabs or lead wires.
 - Current is supplied to the armature by 2 brushes.
 - Only Ceramic magnets are permitted. (Cobalt and rear earth magnets are not allowed)

Armature:

Shaft diameter is 3.175mm (0.125inches), production tolerances are allowed. The rotor shall have three poles with windings. Stack length 21.00mm minimum, 22.80mm maximum (both dimensions to be measured with Epoxy/Hysol insulation removed). No split rotor is allowed. The laminations have to be continuous without anything in between. The thickness of the stack plates is 0.35mm +/- 0.05mm. Only round copper wire is to be used for winding. The armature has to be permanently marked by the manufacturer, showing the number of windings and name of the manufacturer.

b) Brushless motor:

- a) Sensorless as well as sensed motors are allowed.
- b) The motor has to be rebuildable . Ball bearings are allowed.
- c) If the motor is sensed:

It must use a six position JST ZH connector model number ZHR-6 or equivalent connector with 6JST part number SZH-002T- P0.5 26-28 AWG contacts or equivalent.

Wire sequence must be as follows:

Pin #1 - Black wire ground potential

Pin #2- Orange wire phase C

Pin #3- White wire phase B

Pin #4 - Green wire Phase A

Pin #5- Blue wire temp control, 10K thermistor referenced to ground potential

Pin #6- Red wire +5.0 Volts DC +/-10%

Compatible speed control must use the 6 position JST header part number X-6B-ZR-SMX-TF (Where the X denotes the stile of header), or equivalent.

The power connector has to be clearly marked A, B, C:

A for phase A, B for phase B and C for phase C

d) "05" Size specifications

Can: Overall maximum diameter is 36,02mm measured at whatever point yields the maximum dimension, excluding solder tabs or lead wires. Overall minimum diameter is 34,0mm measured at whatever point yields the maximum dimension, excluding solder tabs or lead wires. Maximum length is 53,0mm measured from the mounting face of the motor to the furthest most point of the end bell, not including solder tabs, lead wires or original manufacturer's logo or name. Minimum length is 50,0mm measured at whatever point yields the maximum dimension, excluding solder tabs or lead wires.

Motor mounting holes must be on 1,00 inch (25.0 - 25.4mm) centres.

Stack/Stator: The stack or backiron must be continuous. The laminations have to be one after the other without anything in between.

Stack/backiron minimum length 19.3mm, maximum 21.0mm.

The thickness of the stack/backiron laminations is 0.35 +/- 0.05mm. All laminations must be of the same material. Inside diameter of stack or

windings equals the central space between the laminations or assembly of windings and must accept 'plug' gauges of 12.5mm minimum,

16.0mm maximum. These dimensions to be measured with the centre

of the 'plug' gauge in-line with the centre of the motor can. (ie. concentric to can).

Winding: Delta and Y wounded stators are permitted. Only circular (round) pure copper is permitted. There is no turn limit.

Rotor: Output shaft diameter must be 0,125" (3.175mm). Only one piece, two poles Neodymium or Ferrite magnetic rotors are permitted.

Magnet: Minimum length 23,0mm. Maximum 27,0mm. Magnet minimum diameter 12,0mm, maximum 15,5mm. Rotor magnets must be marked or colour coded to identify the composition of the material used.

- e) All motors must have the original manufacturer's logo or name moulded into the end bell.

3 BATTERIES

3.1 Only NiCd or NiMH cells are approved. Cells are rated at 1.2 volts nominal. The size of the individual cell(s) to be: - Diameter 23.0mm +0/-1mm, Overall length 43.0mm +0/-1.5mm. Measurements include original manufacturers heat shrink. Overall length is the maximum length before attaching/soldering any link wires or battery bars.

Measurements valid only for new uncharged cells. It is accepted that fast charging may result in cell distortion. However used cells may never be more than 44mm long. AS from 2008 onwards cells may never exceed 43mm. Weights to conform to the EFRA cell approval list.

3.2 1/10 Touring scale cars will be driven by a maximum of 5 cells, a minimum weight of 1350 gram and not use receiver batteries

3.3 1/12th Cars racing modified motors will be driven by a maximum of 4 cells and 4.8 volts nominal

3.4 1/12th Cars racing spec motors will be driven by a maximum of 6 cells and 7.2 volts nominal.

3.5 Batteries may not be charged nor changed during a race

3.6 Additional batteries to power the radio equipment in the car are allowed.

3.7 Any new NiCd or NiMH must be commercially available for a reasonable time before it can be used in an EFRA event. Therefore any new cells have to be submitted to the EFRA Section Chairman.

Rule takes its effect as from January the first 2006. Cells submitted or approved before that date keep their approval for their lifespan.

Cells have to be received by December 31st. and will be legal for use from the following April 1st., subject to the Chairman being satisfied that; the new cell conforms with technical specifications and the cells will be available.

Details of newly approved cells will be published on the EFRA website as soon as available.

3.8 Only batteries appearing on the official EFRA website will be legal for use in EFRA sanctioned meetings.

3.9 All previously approved batteries may be used for their lifetime or until their specifications no longer comply with the original one that was approved. It is the driver's responsibility to prove the legality of his cells in case of doubt

4. ELECTRONIC DRIVING AIDS

4.1 The radio control receiver in the car may operate steering and motor management. A separate battery supply for the powering of the timing equipment is allowed. Using the receiver to capture electrical signals from sensors carried in the car is prohibited, be it wireless or not.

- 4.2 Automated steering, gyroscopes to control car movement, traction control, active suspension are not allowed
- 4.3 The speed controller may have a device to limit the current/voltage passed from the batteries to the drive motor (e.g. timed delay, current limiter, keyboard programs) as well as a passive data recording device but setting or programming of these devices must only be possible whilst the car is stationary.
- 4.4 No other signals than these for the official lap counting transponder may be sent from the car.
- 4.5 Any competitor found in contravention of the spirit or fact will be disqualified from the meeting. The race organiser has the right to inspect any car, its components and transmitter at any time during the race event.

5. DRIVER PROCEDURE

- 5.1 Before your heat, if needed collect the auto timing equipment from dispatch and fix it to the car.
 - 5.1.1 When hand out auto-timing equipment is used, it is the driver's responsibility to fit it appropriately to the car and to remove it after timed heat if required.
- 5.2 When a personal transponder is used the driver is entirely responsible for the efficient functioning of the device.
- 5.3 As soon as race control allows, collect your transmitter, switch on and drive car to the start line.
- 5.4 When your heat has finished. Return transmitter, retrieve your car, switch off and bring it to scrutining with the handout auto timing equipment if required.
- 5.5 Marshal the heat following your own at the numbered position corresponding to your car number.
- 5.6 Collect your car from scrutining after marshalling.
- 5.7 The race director may demand the drivers to stand on the indicated positions on the rostrum.
- 5.8 The race director has absolute authority at the meeting but refer to your team manager if you encounter problems.
- 5.9 It is not allowed to leave the rostrum before the race is declared over by race control.

6. MARSHALLING

- 6.1 Only drivers taking part in the competition may and must marshal heats and finals (subject to 6.5). Drivers will marshal the heat/final after their own. The drivers of the last heat will marshal the first heat.
- 6.2 A substitute marshal is only allowed if the driver is physically disabled and if approved by the Race Director.
- 6.3 Failure to marshal or provide an authorised substitute will result in the loss of best qualifying time if qualifying by fastest time is in operation or of the best points score if qualifying is by round by round.
Failure to marshal is clarified as: not being at the correct marshalling point when the first car leaves the start line or final grid.
- 6.4 It is the Team Manager's responsibility to ensure drivers marshal finals at EC's. Country allocations will be reduced pro-rata in case of non-compliance.
- 6.5 The organisation of drivers marshalling for the finals is the responsibility of the organiser.
- 6.6 The organiser must provide a marshal for any unfilled position. i.e. previous heat had less drivers or marshal missing.
- 6.7 All marshals must wear safe and sensible footwear that will not become detached when performing marshalling duties. (Sandal's are not acceptable).

7. EUROPEAN CHAMPIONSHIPS

- 7.1 European Championships will take place every year there is no World Championship in the concerned class held within Europe. However the general meeting can decide otherwise if deemed to be in the interest of the sport.
- 7.2 ALLOCATIONS
 - 7.2.1 The country allocations for the EFRA European Championships will be established by the section meeting and published in the minutes.
 - 7.2.2 Allocation and re-allocations are according to the general rules.
 - 7.2.3 If available all countries receive re-allocated places in order of the allocation list, unless stated otherwise in this list. Any Federation requiring to be considered for re-allocations should put their request in writing to the Section Chairman no later than 1st January.
 - 7.2.4 At least 100 entrants for 1/12 and 130 for the other classes (One may consider up to 150 participants if timetable and facilities i.e. driver tables etc, permit) are to be accepted for European Championships and GP's.
 - 7.2.5 For EC's one country's allotment is in no case to be higher than 33% of the total number of listed entries ("No-show" and last minute cancelling drivers are not to be considered).
 - 7.2.6
 - a) The preceding year's European Champion will automatically be allocated a place from the EFRA allocation for the World Championships.
 - b) The reigning World Champion, if European, will automatically be allocated a place in the following two European Championships.

8. TIME TABLES:

- 8.1 The Race Organiser should schedule all events for each day to be completed and the track closed by 18.30 hours. It is recommended to end the last day early enough to allow participants to start their return journey.
 - 8.1.1. 1/12th EUROPEAN CHAMPIONSHIP:
 - Friday:
 - 1-2 Round(s) of un-timed practice (organizers discretion),
 - 2 Rounds of timed Practice
 - Opening Ceremony (heat re-seed, based on average lap times of timed practice 1 & 2, will be carried out while the opening ceremony is taking place)
 - 2 Rounds of timed practice in new heat format
 - Saturday:
 - 5 Rounds of Qualifying (In heats used for the last 2 rounds of controlled practice)
 - Sunday:
 - 1 Round of Qualifying
 - 1 Controlled practice in final groupings
 - 3 rounds (legs) of finals
 - 8.1.2. 1/10th Touring EUROPEAN CHAMPIONSHIP:
 - THURSDAY: 09:00 Registration, Open and Timed Practice
 - FRIDAY 09:00 2 rounds of controlled Practice and 2 Qualifying Rounds
 - SATURDAY 09:00 3 Qualifying Rounds and Practice in Final Format
 - SUNDAY 09:00 second part practice in Final Format and Finals
 - 8.1.3. 1/10 E off-road EUROPEAN CHAMPIONSHIP:
 - MONDAY:
 - Free practice 2WD, Registration and Technical Inspection
 - TUESDAY:
 - Controlled Practice and Qualifying Rounds 1-3
 - WEDNESDAY:
 - Qualifying Rounds 4-5, Finals and Prize Ceremony

THURSDAY: Free practice 4WD, Registration and Technical Inspection

FRIDAY: Controlled Practice and Qualifying Rounds 1-3

SATURDAY: Qualifying Rounds 4-5, Finals and Prize Ceremony

The Race Organiser can change the above timetable providing he does so well in advance.

8.2 TIMETABLE FOR GRAND PRIX MEETINGS

8.2.1 The timetable for Grand Prix will be left to the discretion of the Organisers taking into consideration the number of competitors in each class. Organiser can determine the Timetable for all racing

9. RACING FORMAT EFRA EUROPEAN CHAMPIONSHIPS AND GRAND PRIX

9.1 PRACTICE

9.1.1 Free practice for E.C. events must be allowed as stated in the concerned timetable. No practice or racing is allowed on the track for 7 days preceding this (see also General rule 8.1.).

9.1.2 For all EC's: 2 series of organised practice with cars grouped in heats will be held with at least one using the official time-keeping system.

9.1.3 During controlled practice the driver must be present and his transmitter switched on for checking radio interference.

9.2 START PROCEDURE

9.2.1 There will be a minimum of seven (7) minutes between the starts of heats, (10) ten for 1/12th.

9.2.2 Qualifying heats: the delayed start procedure (Staggered Start) will be used and a verbal start signal, mentioning the car number, will be given for each car. Cars must start when directed by the race director. Cars not starting when directed may start after the last car has crossed the lap counting loop.

9.2.3 Finals: After the 30 seconds signal, cars not on their start grid must be placed at the rear of the grid.

An audible signal generated by the timing equipment will be given after the "ten seconds" in a random delay of between 1 and 5 seconds.

9.2.4 Jump-starts (after 10-second signal) -front wheels crossing start line or their marked startbox - 10-second penalty. Front wheels crossing the line or box by one-meter: 1 lap penalty. Jumpstarts are no reason for a re-start.

9.3 RESTART PROCEDURE

9.3.1 The Race Director or the Assistant Director, in absence of the race director, may order a restart.

9.3.2 In the event of an aborted start procedure; race must restart at least from the "30 seconds" before the start" announcement.

9.3.3 If the race is stopped before the first car has completed a full lap of the track then the race will be immediately re-started after the reason for the stoppage has been cleared. If the race is stopped after the first car has completed a full lap then the race will be re-run at a convenient time allowing for the recharging of batteries.

9.4 QUALIFYING

9.4.1 All qualifying Heats and Finals 1/10th will be 5 minutes and the last lap plus the time to complete this last lap up to a max of 40 seconds. For 1/12th the racing times will 8 minutes.

9.4.2 Qualifying will be by fastest time for 1/12th, by the 2 fastest times added together for 1/10th On-road and "round by round" points system for 1/10th Off-

road to cope with changing track and/or weather conditions.

If the 'Round by Round' qualifying method is used, the number of Rounds to count are as follows: - Six Rounds three to count, Five Rounds two to count, Four Rounds two to count, Three rounds two to count, Two Rounds one to count. Less that two Rounds completed event null and void.

If the intended maximum number of Rounds cannot be completed, due to weather or unforeseen circumstances, the number of Rounds to count will follow the same format. Qualifying Round has to be completed for any heats of that Round to be counted.

Highest qualifying position in each round will score zero (0) points, second place 2 points, third place 3 points, fourth place 4 points and so on. All other qualifying round scores will be discarded. In every round, in the event of a tie the points will be equally awarded to each driver and the first next driver not tying will get one point less.

9.4.2a 1/10 Touring cars racing under raining conditions

If it is impossible to complete all qualifying heats under the same weather conditions, (wet, semi wet or total dry) the following rule will become effective: Before the start of every heat the race director has to announce if it will be a dry heat or a wet heat.

The race director has also the chance of declaring that the actually started racing heat is now running under wet conditions, just as well as after the ended racing heat, if the average lap times during the heat are (or were) becoming more than 20% slower.

If every qualify round had at least one dry race cycle every round will count. If not all qualify rounds had at least one dry race cycle only the wet rounds will count

9.4.3 In the event of a tied position the driver with the single highest finishing position in either of the best two rounds that counted will be awarded the tie. In the event of a continuing tie then the laps and times from the best result in points will be compared. The driver with the fastest laps and time will be awarded the tie. In the case of a continuing tie, then the times from the second best scores will be compared.

9.4.4 When a driver incurs a penalty which results in his time and therefore points in any Round being disallowed, then all drivers below the disallowed position will move up one place. (In the event the penalized driver is a tie on obtained points the one with the best time will be lost).

9.4.5 The qualifying heats will be a maximum of 10 drivers and where possible equal number of drivers in each.

9.4.6 Cars will start in one line across the track in staggered start mode for the qualifying heats.

9.4.7 During the first round of qualifying, heat-starting order can be determined by lottery, or by the driver's performance in controlled practice based on his 2 best consecutive laps during the last round of controlled practice. During further rounds, heat-starting order will be by the overall fastest time of drivers in their heat. This will apply whether the Fastest Time Qualifying System or Round by Round System is used.

9.4.8 In order to give drivers an equal chance during qualification, organiser may re-seed these drivers that are obviously way above or under the average in their group into a more suitable heat whenever possible.

9.4.9 Off road heats will be run in the following sequence for the 5 qualifying rounds:

Round 1: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13

Round 2: 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 1, 2, 3

Round 3: 7, 8, 9, 10, 11, 12, 13, 1, 2, 3, 4, 5, 6

Round 4: 10, 11, 12, 13, 1, 2, 3, 4, 5, 6, 7, 8, 9

Round 5: 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1.

On road heats will always be run from 1 to 15.

9.4.10 If the number of heats differs from 12, or if the event is planned with more/less rounds, a sequence following this general scheme has to be used.

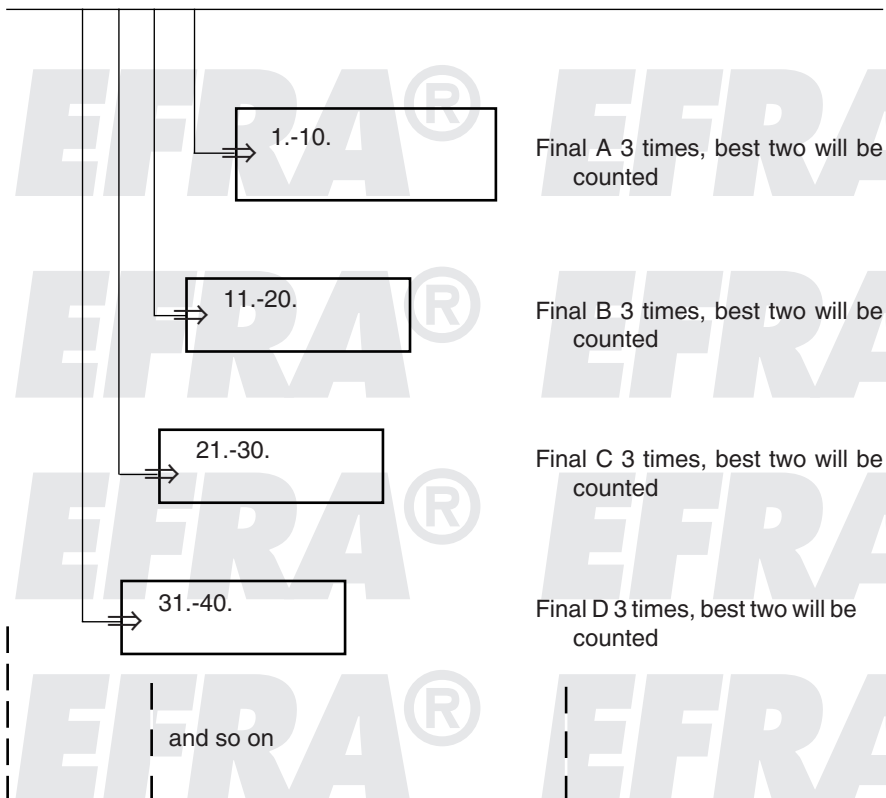
9.4.11 The qualifying results will determine the composition of all finals with the top 10 proceeding to the "A" final and so on down.

9.4.12 Off road: One round of controlled practice using the official time keeping will be organized for the A finalists. On road: A controlled practice will be applicable to all finals.

9.4.13 Qualifying results will be published after each round

10 FINALS

10.1 There will be 10 drivers in all finals where possible at. All drivers will take part in a final.



- 10.2 The winner determined from the combined A finals will be the champion. If the A finals cannot be completed, the awards will be made on the best qualifying positions.
- 10.3 Off road: Each time (race) of the main "A" final will be considered a separate race. The finals will be run from slow to fast with the 3 legs of the "A" final in between.
On road: All finals will be run in 3 legs from slow to fast.
- 10.4 The best 2 out of 3 to count.
- 10.5 The winner of a final gets 1 point; the second gets 2 points and so on up to 10 points for the 10th driver.
- 10.6 In the event of a tied position the driver with the single highest finishing position in either of the best 2 finals that counted will be awarded the tie. In the event of a continuing tie then the laps and times from the highest finishing position will be compared. The driver with the fastest laps and time total will be awarded the tie. In the case of a continuing tie, then the times from the second best position will be compared.
- 10.7 Cars, which do not pass the start/finish line after the prescribed race time, will be classified according to the number of laps recorded. The "A" finalist with the lowest number of points will be the European Champion or the winner of the grand prix.
- 10.8 All final results will be published at least 10 minutes before prize giving.
- 10.9 There will be awards at least for all "A" finalists, and the winners of any other final. If no round of Final(s) are completed the results of the event are taken on qualifying positions.
- 11. TECHNICAL INSPECTION**
- 11.1 All cars may be called for technical inspection at any time but must always be presented for scrutinizing immediately after completing their heat, qualification or final.
- 11.2 Failure to meet the technical rules will result in loss of the concerned heat result.
- 11.3 Non-compliance obviously resulting from race incidents will not be accounted for at scrutinising
- 11.4 After "A" finals the cars must be collected and impounded by organiser's staff ("park fermée").
- 11.5 The motors of the top 3 finishers may be dismantled in order to check their conformity with the rules.
- 11.6 It is allowed to change the chassis of the car, providing the replacement is of the same design, specifications and material as the original item that was registered prior to the start of racing. The new chassis has to be registered and presented to the authority
- 12. GENERAL REQUIREMENTS FOR COMPETITION CARS IN ELECTRIC CLASSES**
- 12.1 Cars must be realistic and when initially entered in the meeting have neatly finished and complete body shells.
- 12.2 Open cockpit cars must have a realistic driver figure fitted in an appropriate position at all times when racing. This consists of at least a driver's head/helmet, shoulders and arms and should be painted in a realistic appearance, colour and garb.
- 12.3 The body and chassis must be securely joined at all times when the car is on the track. Driving on the track without body is not to be allowed at any time.

- 12.4 All cars shall have identifying numbers in at least three positions, right, left and on front of the car.
- 12.5 No car shall be constructed so as to be dangerous or damage the track surface or other competitor's cars.
- 12.6 The cars must allow fitting a time keeping transponder in a suitable position with the correct orientation.
- 12.7 Any type of speed controller, not causing interference's of any kind to lapcount, computers, transmitters etc., may be used, but it must be contained within the car and not protrude through the body shell.
- 12.8 All cars must have a transparent windscreen. Open or painted windscreens are not allowed except for models of prototypes that did not have windscreens.
- 12.9 Side or rear windows must be clear. The driver may have his name on the side window in the same scale as the car.
- 12.10 Openings in the body must be appropriate to the full size prototype (Scoops, vents etc.).
- 12.11 Wheel arches must be cut out if the prototype ran that way.
- 12.12 Tyres must be black except sidewall detailing.
- 12.13 Openings for wing mount or antenna shall provide no more than 10 mm clearance.
- 12.14 Definition of a wing: A wing is an additional item attached to the car.
- 12.15 Definition of a Spoiler: A spoiler is that which is moulded in the body.
- 12.16 Spoiler and side dam dimensions include that which is moulded into the body.
- 12.17 Bumpers are not required. If fitted, bumpers must be constructed so as to minimise injury that may result from being hit by a car. The overall width may not exceed the overall width of the front of the car, including wheels.
- 12.18 Wire bumpers shall be made of wire between 2.5 mm and 4 mm in diameter. Bumpers made from sheet type material shall be between 2.5 mm and 6.5 mm thick, with all exposed edges smooth and well rounded. Closed cell foam (i.e Pu-RIM) bumpers may be 2cm thick. Rigid blade-like bumpers made of hard, non-resilient material such as metal, brittle plastic, plywood, masonite etc., are not allowed.
- 12.19 All weight minima are applicable to cars equipped with fixed personal transponder as well as for those using (hand-out) auto-powered transponders. The later are to match the minima without this transponder.

B REQUIREMENTS FOR ELECTRIC ON ROAD CLASSES

1. GENERALITIES

1.1 On Carpet tracks a minimum ground clearance of 3mm (excluding spur gear) for 1/12 is mandatory at the start of each heat and final.

2. BODIES:

2.1 Any newly homologated bodies must have the part number moulded into the front windscreen.

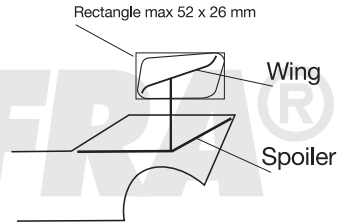
2.2 Body cannot be trimmed higher than lower body trim lines.

2.3 No portion of chassis, wheels and tyres, or equipment may extend beyond body except to the rear. (Exception -Formula car suspension chassis and abbreviated bodies with no engine cover).

2.4 Wheel nuts and/or axles must not protrude more than 1.5 mm beyond the wheels

2.5 No more than 1.5 mm of wheel outside diameter may be exposed on the outside of the wheel (i.e. not covered by the tyre). If wheel discs are used they should be secured by a screw or clip.

2.6 In all classes where possible, an 8th scale number must in addition be placed on the roof of the body (NASCAR style) for absolute best identification. Numbers on front windscreens must be avoided. The organizers will supply the numbers.



3. ROLL-OVER MASTS:

3.1 A rollover mast may be fitted. If so, it must have a blunt end for safety reasons, terminate in a closed loop at least 4.75 mm O.D. or a ball or button not less than 8 mm in diameter.

3.2 If a rollover mast and radio antenna is fitted, the antenna must be part of the mast along its length. Max. Height from ground 35 cm.

4. BUMPERS

4.1 All cars may run a rear bumper, which must be behind rear tyres.

4.2 If used, front bumpers must be flat; parallel to the ground in all directions.

5. TYRE ADDITIVES / TRACTION IMPROVING TREATMENTS:

5.1 All Tyre treatments, governed by health, nuisance and track damage considerations will be at the discretion of the organisers and EFRA. I.e. Normally only odourless tyre cleaners or traction additives will be allowed.

5.2 Generally allowable products for carpets are: Corally TC2 (Jack the gripper), LRP Top grip carpet, Orion Foam TQ. and CS Grip tyre conditioner. For Tarmac use: Orion street juice, Jack the Gripper, Trinity Tyre Tweak, GM X grip 3, LRP top grip Asphalt.

5.3 Any other product can be added to the list by request and once checked by section chairman and organiser as being ok.

5.4 European Championships: A list of allowed substances or products will be published with the entry form.

6. PARTICULAR TO 1/12th SPORTS CARS

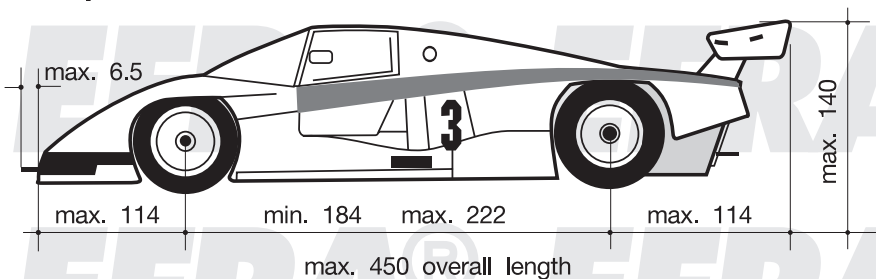
6.1 BODIES:

6.1.1 The body must be a 1/12th replica of an actual racing car in all areas: GTP/ GROUPC/World Sports Cars (WSC)/GT racing classes 1 A, 2 (GT1 & GT2)) and

Le Mans Prototype (LMP) bodies only will be allowed. Body shells must be submitted to the EFRA Body shell Homologation Officer for approval. A list of homologated bodies must be sent with the drivers package and to the organisers and be available on the EFRA website.

- 6.1.2 Wheel cut-outs may not be more than 15 mm larger than tyre radius (Exception - scale size and/or shape wheel cut-outs). Wheel wells must be cut out if those on the original car were cut out.
- 6.1.3 Only one wing is allowed on the car unless the actual car had a second wing. The second wing must be scale within 10% in size and location. The wing may be not closer than 6.5 mm to any part of the body other than the tail fins or side dams.
- 6.2 MEASUREMENTS AND WEIGHTS
 - Maximum overall width of the car: 172 mm
 - Minimum weight: 800 gram for 4 cell and 890gram for 6 cells.
 - Wing: Maximum width: 172 mm, the wing profile has to fit in a rectangle of 52mm (height) x 26mm
 - Dams: Maximum dam length: 102 mm, max. height 25 mm. These dimensions include molded-in portions of body.
 - Spoilers: Max. Spoiler height: 25 mm, max length 35 mm. These dimensions include the molded in portions of the body, the use of a gurney flap to extend the wing length is acceptable.
 - Bumper: May extend 6.5 mm beyond side of body or to 172 mm whichever is less. May extend 13 mm forward of body, but in same shape as body.
 - Wheel rim diameter: Minimum 29 mm and Maximum 38 mm. (Including all non-rubber parts of the wheel and tyre).
- 6.3 TYRES
 - 6.3.1 All tyre sizes apply at the start of the race.
 - 6.3.2 Tyres Minimum width 13 mm. Maximum width 40 mm. The tyre width is measured at the widest part of the tread or sidewall.
 - 6.3.3 Any tyre diameters will be allowed. The diameter must be maintained over at least the minimum width of the tyre.
 - 6.3.4 Each tyre on the car must only be constructed from 1 compound (shore rating/density) of foam rubber.
 - 6.3.5 Tyres must not be wet or greasy from additive at the start of a heat or final.
 - 6.3.6 Technical Inspection can demand to check the tyres prior to each start

Group C



7. PARTICULAR TO 1:10 ELECTRIC SALOON CARS

7.1 BODIES:

7.1.1 Only bodies that comply to the body guideline for 1:10 electric touring car bodies as per drawings in this handbook of real touring cars that have a minimum length of 4200mm in the original car are allowed. No GT or Sports car bodies allowed. All Touring car bodysHELLS to be submitted to the EFRA BodysHELL Homologation officer for approval.

7.1.2 Bodies are not to be cut above the bottom line of the rear bumper.

7.1.3 A wing may be fitted to the rear of the body but not on the roof or above the roofline.

7.1.4 The wing may overhang the rear of the body of the car by 10 mm.

7.2 MEASUREMENTS AND WEIGHTS

- Maximum overall width (with body) 200 mm
 - Maximum overall width (without body) 190 mm
 - Minimum height (to top of the roof) 115 mm (ready to run)
 - Maximum wheelbase 270 mm
 - Minimum weight 1350 gram
 - Wing: maximum width 190 mm. The wing profile has to fit in a rectangle of 25mm (height) x 40
 - Maximum wheel rim diameter (excl. ribs) 50 mm
- The use of multiple-speed transmissions (gearboxes) and slipper clutches is not allowed.

All cars must have independent suspension operating on all four wheels (no PRO 10 cars allowed).

Only a fixed single ratio transmission is allowed and it may not include a mechanical device/s between the drive motor output and the gearbox input for the purposes of controlling torque (e.g. slipper clutches).

7.3 TYRES

7.3.1 Only moulded tyres are allowed (no sponge tyres).

- Maximum tyre width 26 mm
- Minimum tyre width 18 mm

7.3.2 At EC's it is only allowed to use the tyres that were agreed by the section meeting at the EFRA AGM together with the race organiser (race organiser will make their recommendation). For dry weather racing there will be a single control slick tyre with insert and will come pre-glued to the wheel (insert, tyre and wheel to be same for all drivers) and commercially available via model/hobby shops. For wet/damp conditions there will also be a pre-glued control set of tyres. For use at the EC, the tyres must be bought from the organiser. For each competitor there must be at least 1 set of dry and wet weather tyres available to be bought for practice at the EC.

7.3.3. 2 sets of 4 dry weather tyres are allowed for qualifying, and an additional 3 sets of 4 dry weather tyres are allowed for A finals. All lower finals only one additional set of dry weather tyres. 1 set of 4 wet weather tyres are allowed to be used for both qualifying and finals.

7.3.4. Tyres from qualifying may be used in the finals

7.3.5. For wet/damp conditions a treaded tyre may be used but only when the Race Director gives his permission. This treaded wet tyre does not form part of the limited number of sets.

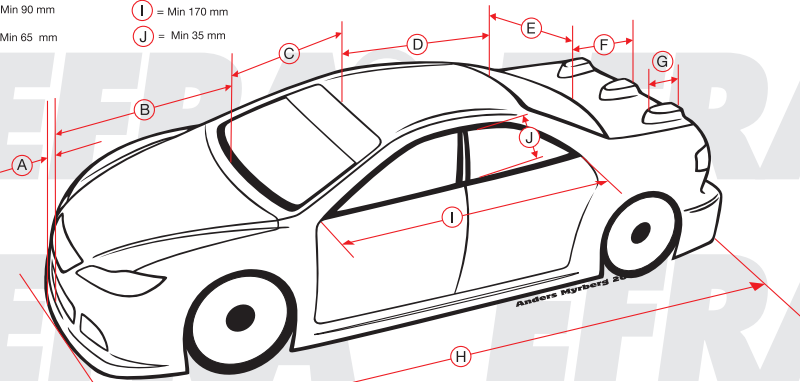
7.3.6. Tyres/wheels may not be modified. Changing of tires between drivers is not allowed. Drivers must have their wheels and tyres marked by Technical

- Inspection and this marking can be done at any time.
- 7.3.7. The Technical Inspector must mark wheels/tyres before being presented to Technical Inspection for qualifying heats and finals.
 - 7.3.8. Unmarked wheels/tyres may not be used on the car during qualifying heats and finals but are allowed for practice.
 - 7.3.9. Technical Inspection shall be responsible for recording the number of tyres used by each driver.
 - 7.3.10. No extra sets are allowed for a re-run of a heat..

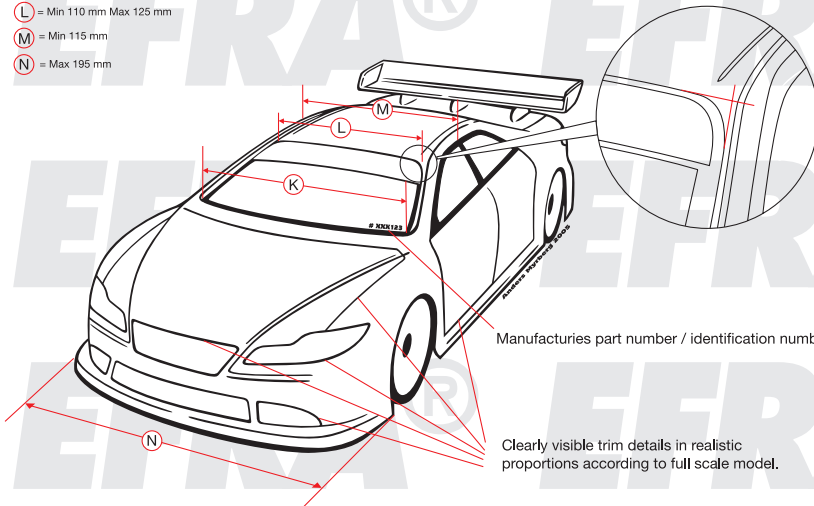
GLOBAL BODY SPEC (GBS for Electric Sedans)



- (A) = Max 10 mm
- (B) = Min 105 mm
- (C) = Max 85 mm
- (D) = Min 90 mm
- (E) = Min 65 mm
- (F) = Max 65 mm
- (G) = Max 25 mm (Max 3 posts)
- (H) = Min 410 mm
- (I) = Min 170 mm
- (J) = Min 35 mm

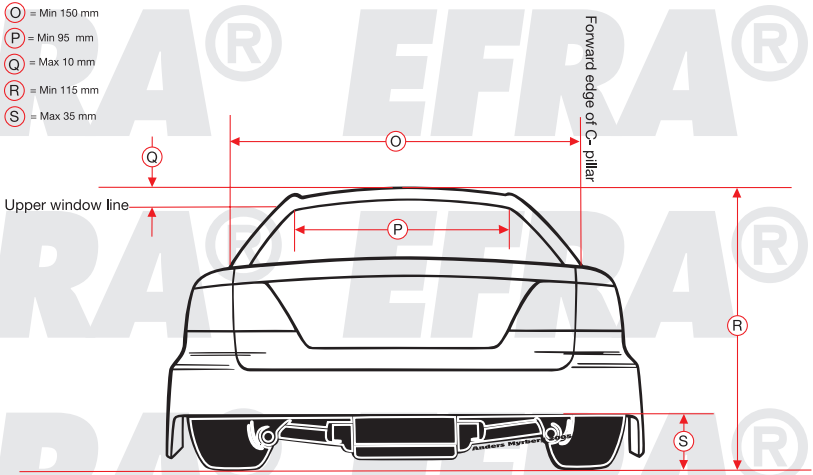


- (K) = Min 140 mm Max 155 mm
- (L) = Min 110 mm Max 125 mm
- (M) = Min 115 mm
- (N) = Max 195 mm



Manufactures part number / identification number.

Clearly visible trim details in realistic proportions according to full scale model.



C PARTICULARS for 1/10 OFF ROAD

1. GENERALITIES:
 - 1.1 Cars entered for off-road competitions should be reasonable representations of the style of full size cars generally accepted as being suitable for rally-cross, rallying or desert racing.
 - 1.2 There are two classes of cars: 2WD and 4WD. Both must be run and drivers are allowed to enter both classes.
 - 1.3 All open gears must be enclosed or protected so as to prevent injuries.
 - 1.4 Any modification to the car is allowed.
 - 1.5 A differential may include a mechanism for apportioning torque over the axle/s (e.g. limited slip differential). This mechanism must only be capable of adjustment manually whilst the car is stationary
2. MEASUREMENTS AND WEIGHTS:

Maximum overall length:	460 mm
Maximum overall width:	250 mm (At any point of suspension travel)
Maximum overall height:	200 mm (to be measured with the suspension fully compressed)
Minimum weight 2WD cars:	1.474 gram
Minimum weight 4WD cars:	1.588 gram
Maximum size of rear wing:	220mm wide, the wing profile has to fit in a 80mm x 80mm rectangle
Maximum size of wing side-dam:	Any side-dam has to fit an 80mm x 80mm rectangle
Maximum overall diameter of wheel & tyre:	90mm

Measuring equipment for width, length and height should be constructed preferably from metal or alternatively high quality board. The materials will be

of suitable thickness to eliminate any distortion.

Design of the equipment to allow all points of the car to be measured.

3 TYRES

3.1 Grand Prix: Any combination of commercially available 1/10th scale wheels and tyres may be used.

3.2 European Championships: The organiser will propose a 2 types of tyre for the 2wd rear axle and the 4wd rear axle. The manufacturer and full description of the tyres chosen must be given but there remains free choice of compound. The proposed tyre choice will be ratified at the EFRA section AGM prior to the EC and provided always that the chosen tyres are commercially available throughout the EFRA nations).

3.3 No metal or hard plastic may be used for spikes

3.4 Modifications to tyre construction and tread patterns are allowed. 'Cut and Shut' is permitted at Grand Prix only and even so if the parts of one or more different tyres are glued together, provided always that the constituent parts are all recognisable as coming from commercially available 1/10th scale tyres.

3.5 No sponge or foam tyres are allowed except for foam inserts completely enclosed within the sidewalls.

3.6 No tyre additives other than water are allowed, inside or outside of any tyre.

4 RAIN PROCEDURE for QUALIFYING

4.1 The Race Director and the Referees are jointly responsible for the decision to stop racing in the event of adverse weather conditions.

4.2 When Racing is suspended as per the rule above, then racing will recommence, when weather permits, with the heat that was next to be run prior to the interruption.

4.3 Every effort should be made by the Race Directors to make necessary repairs to the racing surface prior to recommencement of racing.

APPENDIX 5

LARGE SCALE I.C. TRACK RULES

1. RACE FORMAT

- 1.1 There will be two annual events called European Championships to determine the European Champion in:
- a.) 1:4 Scale GT/ Saloon, Formula 1
 - b.) 1:5 Scale Touring Cars
- The EC 1:4 Formula 1 and the EC 1:5 Touring cars can be combined during two consecutive weekends at the same venue.
- Formula 1 Large Scale Euro Championship series. consist 6 Grand Prix races. According to EFRA GP races. The best 3 results taking account. Points shall be given as follows - GP 2 75, 71,
- 1.2 The results of the EFRA-GP's combined with that of the European Championship, will give the EFRA ranking list.
- The Ranking list will be a continually updated one, for every new EFRA GP or EC/WC added, the oldest one will be deleted.
- 1.3 The number of drivers in one race meeting is limited to 120. The number can only be raised up under certain circumstances by the section meeting during the AGM.
- 1.4 Qualification for the European championships and World championships 1:5th Touring Cars:
20 places for the European championships and 7 places for the World Championships for the following year's meeting/s to be offered to the highest ranked drivers competing in the large scale efra gp series. The remainder to be split as per normal between countries as outlined in general rule 3.6.
Only the EFRA GP meetings to count for the points system, with the drivers best 4 meetings out of the 6 to count (or 50% plus 1 counting, e.g., 5 out of 8 meetings).
Points system to use: 1 = 50, 2 = 47, 3 = 45, 4 = 44, 5 = 43, ... 10 = 38, 11 = 35, 12 = 34 ... TQ = 1 extra point

2. RACE PROCEDURE

- 2.1. Duration of the races:
- | | |
|--------------------|---|
| Free practice max. | 8 minutes |
| Heats | 10 minutes (plus the last lap and time of the last lap) |
| Sub-finals min. | 15 minutes, max. 20 minutes up from the 1/32 final (plus the last lap and time of the Last lap) |
| Final Saloon | 30 minutes (plus the last lap and time of the last lap) |
| Final Formula 1 | 45 minutes (plus the last lap and time of the last lap) |
- SPECIAL REGULATIONS F1
- 3 rounds of timed practice
- Qualification heats:
- 6 heats 10 minutes (plus the last lap and time of the last lap) Rolling starts
- Half finals 30 minutes.
- 2.2. a) The EFRA Christmas Tree will be used.
b) All other drivers are allowed to race a sub-final.
c) Sub-Finals: The first 3 drivers from each sub-final progress up to the next final.
Semi-final: The first 4 drivers from each semi- final progress up to the final

together with the next 2 drivers with the best times from the 2 semi-finals combined.

- d) In the event of different weather conditions during the semi-finals the first five from each semi-final will move up to the final.
- e) It is not allowed to drive a model car on any other place than the track and the marked track pit lane.

2.3a Number of drivers:

Heat: 10 to 15 drivers (only 1:5), track and facilities permitting.
Sub-finals and finals: Maximum 10 drivers
Final F1 EC Maximum 10 drivers
Final F1 EFRA GP's: Maximum 15 drivers, if the team managers agree
The race format will be notified in the event information and invitation material.

2.3b In the event that the transponder loop is before the exit to pit lane any car than should start from pit lane will start from position 11 on the grid.

2.4 TIME SCHEDULE for EC

EC Tracks must be closed for Large Scale Racing, two weeks prior of the event. No cars are allowed on the track before Tuesday morning.

(Tuesday and Wednesday only for 1:5)

General qualification format for EC's: Minimum 4 and Maximum 6 series of 10 minutes heats depending on the number of drivers.

If there are 60 drivers or less, 6 rounds.

If there are >60 - <80 drivers, 5 rounds.

If there are more than 80 drivers, 4 rounds.

Monday all day	track closed
Tuesday	09:00-18:00 Free practice (ticket system)
Wednesday	09:00-18:00 Free practice (ticket system)
Thursday	09:00-18:00 Timed practice /tech inspection/heats
Friday	qualification heats
Saturday	qualification heats, lower finals
Sunday	09:00 - 17:00 sub-finals and final.

TIME SCHEDULE FOR COMBINED EC

The combined EC will start on Saturday with F1 and carry on with the touring cars following on Tuesday. TC will end on Sunday.

2.5 STARTS

(see also General Race Procedures Chapter 8).

The arrangements of the heats and the numbering must be done using the EFRA ranking list according to the general rule 3.3.6. (The season is the last 365 days before the event). The drivers must stand adjacent to their numbers on the rostrum, the mechanics must remain in their boxes along the pit lane. For all finals, drivers with the lowest starting numbers may choose their position on the rostrum and the mechanics must stand under the driver where this is possible.

- 1 There must be a 3 min. gap between the end of one heat and the start of the next heat. Also a minimum of 2 minutes must be allowed between the issuance of the transmitters and the start of the heat.
- 2 An audible warning will be given at 1 minute and again at 30 seconds prior to the official start, in English and other languages as appropriate.
- 3 From 30 seconds till 3 seconds the cars must be hold at the startingboxes. If a car is not at the starting box at 30 seconds due to unforeseen problems the car may start from the pitlane after other cars have officially started. The

race director and referees will monitor for the abuse of this facility.

- 4 From 10 seconds until 3 seconds prior to the start a second by second count-down will be made in English.
- 5 During Formula 1 Grid Starts at 5 seconds prior to the start, the Starter will lower the starting flag and at 3 seconds the flag will be fully down. The cars must remain in the boxes, no part of the car touching the starting line. For sub-finals and final the "Formula 1" grid start must be used.
The starting order for the qualifying heats will be predetermined by the best results during the organised, timed practice. When using the "Formula 1" grid start procedure, a one lap trial start must be made (to check all transponders). Following this trial lap, the start will be within 5 seconds after the last car is stationary on his correct grid position. No mechanics are allowed on the track. Any car missing from the starting grid, must start from out of the pits lane after the last car on the grid has passed.
- 6 From 3 seconds the verbal count down stops and the actual start-signal will be given by the Starter after a period of between 0 and 5 seconds has elapsed. If the grid is not to the satisfaction of the Starter, he may require a re-start, re-commencing the count down from 30 seconds.
- 7 The official start signal will be audible by means of a hooter, operated by the Starter. This signal will also start the Timing Systems.
- 8 Early starts (i.e. any part of the car touching the starting line), will be penalised. (10 sec. up to 1lap) This penalty is issued by the Starting Official or the Time-keeping official and must be announced immediately after the start. The penalty will be marked on the resultsheet.
- 9 Under no circumstances will the race be stopped due to a jump start.
- 10 The Starter may only interrupt the race and make a re-start in the event that he considers the starting procedure or the start was not carried out correctly.
- 11 Delayed start. As long as the starter has not called the cars to the start line, any participant of the semi-finals and final may request a delay of 10 minutes to carry out repairs on his car. This delay can be granted only once for each semi final and final. - the track is closed, if the delay is requested as a result of frequency or radio problems - the track is open, if the delay is requested for mechanical repairs or problems. If a driver is asking for a delay on frequency problems, the mechanics are only allowed to turn off engine and receiver. They are not allowed to make any repairs including change of tyres.
- 12 When the starter calls the main final to the start line, the mechanics are not allowed to refuel the cars.
- 13 The driver asking for the delay for what ever reason, except an error in frequencies of the race control, must start from the pit lane.

2.5.1 STARTING PROCEDURE OF HEATS

For qualifying heats no stop between practice time (warming up) and start of the heat. Just start the clock when practice time is over. (Flying start.)

- 1 If the number of heats differ from 10, or if the event is planned with more/less rounds, a sequence following this general scheme has to be used.
Round 1: 1,2,3,4,5,6,7,8,9,10
Round 2: 4,5,6,7,8,9,10,1,2,3
Round 3: 7,8,9,10,1,2,3,4,5,6
Round 4: 10,9,8,7,6,5,4,3,2,1

- Starting for Sub Finals and Final will be on a Formula 1 grid depending on the track layout, with the faster Qualifier starting in front of the slower.
- 2.5.2. -1 When the time is over, an audible signal is given. A car finishes when it passes the finish line after the finish-signal is given. The car must immediately return to the pits and may not hinder other cars still racing.
- 2 In case of doubt (on the finish-line when time is over), a car may race one more lap and finish. Whether he finishes or not when time was completed, is up to the Time-keepers and cannot be disputed.
- 3 After returning to the pits, the engine must be stopped immediately and the transmitter turned off and impounded.
- 2.5.3. Qualification Order and Finals.
- 1 After all series have been completed the Qualification order is established, by taking the best result of each driver.
- 2 In case of more than one driver recording identical best results of qualifications the next best result is taken.
- 3 In the case of more than one driver recording identical results in a final, the driver starting with the higher start number is classified as the faster, e.g. if number 5 and 2 have equal times, 5 is deemed to have higher final placing.
- 4 The sub-finals and final are run according to the schedule printed in the official race program, which may only be changed by teammanagers majority vote.
- 5 Starting order for the drivers who moved up to the final is based on number of laps and time.
In different circumstances it will be number 1 from the A-final who gets the number 1 and the number 1 from the B-final who gets the number 2 etc.
- 2.5.4 During the warm-up period, or at any other time of a race in progress, deliberate stopping a car on the race track will lead to be penalised with a 10 second "stop and go" after the start of the race. Consecutive stopping on the race track will lead to immediate disqualification.
- 2.6. RAIN SITUATION
In case of different weather conditions during subfinals the final classification will be as follows: Place 4 of subfinal A and Place 4 of subfinal B will both be awarded place 11th equal in the general classification. Place 5 of subfinal A and place 5 of subfinal B will both be awarded place 13th equal in the general classification and so on.
- 2.7. RACE INTERRUPTIONS
- 1 In the case of a race which is interrupted for more than 60 minutes for reasons beyond the control of the organisers, the jury will decide whether to cancel or continue the meeting.
- 2 In the case of an interruption of a heat the entire heat will be re-run.
- 3 In the case of an interruption of sub-final or a final the following procedure will be used:
- A. If less than 10 minutes of a final has been run, the results will be cancelled and a new start given for the total time of the final. Vehicles may be repaired before the new start.
- B. If more than 10 minutes of the final have been run, the results at the moment of the interruption will be kept. The new start will be given for the time which remains to complete the final. The two results will be added to give the final and definitive placing. If the second start cannot be made

for any reason, the results from the first part will be used as the final and definitive placing.

- C. When the interruption takes place after 75% or more of the race is past, the results as at the time of the interruption becomes the final result. At the moment of the interruption of the race, the drivers will leave their vehicles on the start-line under the control of the Race Director. They may switch off the radio and stop the engine. There will be no repairs carried out to the vehicle or changing of tyres. Any driver who does not observe this rule will be immediately disqualified.

2.8.1. RAIN PROCEDURE DURING QUALIFYING

- 1 The Race Director and the Referees are jointly responsible for the decision to stop a race in the event of rain.
- 2 On the result sheets the Race Director or the appointed official must mark a heat "WET" when the heat was raced under wet conditions. On the corresponding record sheets, this must also be marked. The Race Director together with the Referees will decide in case of doubt. Heats are generally considered to be "WET2" when average lap times are approximately 20% slower than before, due to rain or moisture on the track.
- 3 When all drivers have had at least one dry heat, all results will be counted.
- 4 When weather and time permits, the Race Director may decide to offer an extra heat to those drivers who did not have a chance to drive a heat dry (i.e. when most drivers had 2 resp. 3 dry runs, a 2nd. resp. 3rd. run may be offered to those who had only 1 resp. 2 dry runs).
- 5 When not all drivers have had a chance to run a dry heat, only the wet results will be counted.
- 6 When continuation is judged to be senseless, or when other drivers should be offered a fair chance to drive under dry conditions, the Race Director together with the Referees may decide to end a heat or cancel a complete heat (2.7.-1.)

2.9. ACCIDENTS/CRASHES

- a) A yellow flag situation will be announced, if an accident occurs. (This must be a yellow flashlight combined with an audible signal, that can be operated by the referees and the race-director) During the yellow period overtaking other cars is not allowed. Cars are required to slow down so that they can stop immediately.

Disregarding this rule will be penalised by deducting one lap from the result of the driver concerned in that particular heat, sub-final or final. An official warning has also to be issued. Racing will recommence at racing speed following display of a green flag or the official announcement "track is clear". Signals given by flags have to be visible for all drivers.

- b) Mechanics are allowed to enter the track to save the car of their driver. The mechanic may restart the engine (3x) beside the track, but not repair the car. The mechanic may not disturb the progress of other cars in the race. Mechanics or Spectators entering the track from outside the pit lane to save a car will produce a penalty for that particular car. (Penalties can be given as stop and go or one lap penalty. The referees will inform the Team Managers about the sort of penalties given.)

If served by a spectator then this car should remain stationary until touched by the mechanic to save a penalty given.

The duration of a stop and go penalty given must be always as long as decided by the Referees and announced during the Team Managers meeting prior to the race-meeting. It is not allowed for any of the race officials to change the time of the stop and go penalties during the race meeting.

Three stop and go penalties for one car during one race will lead to disqualification (black flag).

3. TRACKS

3.1.1 Tracks for Large Scale racing will be inspected by EFRA Officials with regard to safety provisions for drivers, mechanics, race officials and spectators. EFRA Officials have the authority to ask for improvements to be carried out before racing starts.

3.1.2 A monitor must be placed in the pit area or under the rostrum during all international races. (WC/EC/GP)

4. GENERAL TECHNICAL SPECIFICATIONS

4.1. ENGINE and FUEL

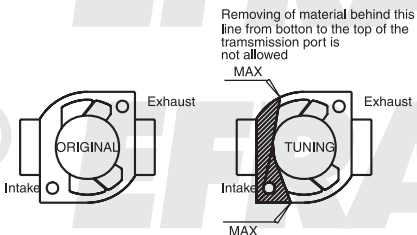
For QS: The engine must be a single cylinder, pull start, 2 or 4 stroke, maximum 26 cm³, magneto Ignition, Turbocharging or compressor are not allowed.

For Formula 1, Off Road and Fifth Scale Saloon:

1. Only one marked engine allowed. In case of rain situation, a second engine could be allowed during the time of wet track. The race director may decide an engine replacement of the same type or repair in case of failure. The replaced engine will be kept in race control till the end of the event. A driver asking for engine replacement will be placed at the end of the grid at his first final. Each driver is only allowed to use a maximum of 2 engines per event.
2. The engine to be a single cylinder, 2 or 4 stroke, maximum 23 cm³, maximum 26 cm³ for F1, QS and Off Road, pull starter.
3. No Turbo charging, Fuel injection, Supercharging, Wankel or rotary valve/distribution engines are allowed.
4. All ignition timing must be mechanically fixed, only manual static adjustment is allowed.
5. No Battery operated ignition allowed. Only a passive ignition system using R.P.M. as the single input parameter is allowed.
6. Only open deck admission ports are allowed.

The removal of material is free as long as the modified shape of the transfer/admission port walls are in the direction of the cylinder bore at all times.

7. The Cylinder block must be of a single casting. no independent liners or slipping liners are allowed.
8. The maximum numbers of admission ports is limited to 4.
9. Engine must be air cooled. The air being driven directly by the flywheel.
10. The crankshaft must be of split shaft configuration, with enclosed big end. No half crankshafts allowed.
11. An air filter must be fitted to the carburettor.



12. The maximum venturi diameter of the carburettor is limited to 13 mm.
13. Only fuel admitted will be petrol normally available at street petrol stations. The fuel must be bought at a fuel Station within the vicinity of the event. Details of the fuel station location and opening times should be provided by the race organiser prior to the event commencement, Fuel testing should begin prior to the start of qualification. Special fuel's like Avgas, race fuel etc. are strictly forbidden. The only additive allowed is mass production two stroke oil.

Technical inspection may ask for a sealed bottle of that oil, to check it. If a fuel is found suspect, the driver will be asked to mix his fuel at technical inspection, so it can be verified.

If an organiser is able to provide fuel at the track, all competitors have to use this fuel. The price of this fuel must not exceed the normal street price by more than 5%. Fuel tests may be made at random during the race. If a fuel is found illegal, the driver will be disqualified from the particular event, he may lose his EFRA licence for up to ten years. The fuel tester must be available to the competitors during the event.

If a driver wants to protest that decision, he has to make a written protest to EFRA with a deposit of 500.- EUR.

4.2. EXHAUST/NOISE REDUCTION

- 4.2.1 Maximum noise level is 81dB (A) measured at 10 metres, 1 metre above the track.

The race director has the authority to decide a different method of measuring (using the EFRA noise trap) as long, as the result will be the same.

If a car produces a noise level much in excess of the other cars, it is the Race Director's decision on whether this car is allowed to race.

Exhausts have to be of minimum three chamber type. No open exhausts or pipes are allowed.

The total exhaust have to be inside the body, with the exception of the tailend of the pipe, which may protrude the body not more than 10 mm.

The body may be cut out at that point max. 20 mm more than the tailend diameter.

Max. inside diameter tail end 13 mm.

- 4.2.2 All cars to be equipped with an air - box to reduce the intake noise of the carburettor and a second muffler (in case, that a two chamber exhaust is used) or a three chamber type muffler. All three chambers must be designed that way, that the exhaust fumes will pass it and then have to change direction twice to get the max. possible noise reduction

The design of that additional silencer is free, but with both systems together, the max. noise level must not be over 81 dB (A).

- 4.2.3 No refuelling allowed during racing for all cars in 1:5 Touring Cars.

Refueling is allowed only in Formula 1 and QS.

4.3. CAR

- a. The car has to have a functioning brake, which has to be capable of keeping the car stationary whilst the engine is running.
- b. A mechanical failsafe has to be fitted to the carburettor which returns the throttle to a closed position in case of breaking of the throttle linkage.
- c. Variable ratio transmission is not allowed.
- d. Only 2WD (rear-wheel drive) cars are allowed.
- e. No other function than steering and throttle/brake are allowed to operate

with radio control by the driver. Any other electronic or hydraulic systems are not allowed in the car, with the exception of electronic failsave to stop the car in case of radio failure and the hydraulic brake system.

- f. The use of an electronic failsafe system is highly recommended.
- g. The ignition kill switch must be on his original place on the engine and the window on this side must be cut. The position must be marked with an E (size 20 mm) on the bodyshell. To create more safety, it is allowed to have a second kill switch fixed near the rear window to allow easy access. This kill switch should be away from hot or moving parts.



4.4 TYRES

Tyres have to be black. The design of the tyre profile is free. It is not allowed to treat the tyres in the pit area. It is recommended that the chemical components of these products must be harmless for people and environment. Liability at the use of tyre additives lies at the user and manufacturer.

5. SPECIAL TECHNICAL SPECIFICATIONS

5.1 1:4 Scale

A 1:4 scale car must be to genuine 1:4 scale, and based on an existing 1:1 scale car.

5.1.1 GENERAL REQUIREMENTS:

The car must comply with the following dimensions:

Width (GT/Saloon)	Maximum 530 mm
Height	Maximum 400 mm
Tyre width - front	maximum 90 mm
Tyre width - rear	maximum 120 mm
	Tyre width is the overall width of the tire at any time during the race. It is not the width of the rims.
Weight GT/Saloon:	Minimum 12 kg
Fuel tank - capacity	Maximum 1000 cm ³ with the air cleaner, fuel pipe and without any removable pieces inside.

5.1.2 BODY

The car must have a Saloon or GT, derived from existing 1:1 Scale cars either used in motorsports, tuned up road versions or historic cars. It must be properly fixed to the chassis. Saloon and GT bodies must cover the top of the wheels at the centre of the axle when viewed from the top.

The bodies must be made 1:4 scale with a tolerance of 10% in all dimensions and must be carefully adapted from a 1:1 scale existing car. Open bodies (including Formula Cars) must carry a minimum of driver arms, shoulders and helmet (in scale) in the place where the driver normally is located. It is not allowed to cut out the windshield, but a maximum size hole of 6 sq cm is allowed for the antenna or fuel bottle if necessary.

No major parts of the body may be lost during racing. Damage must be repaired in the pits immediately if so directed by the Race Director. It is not allowed to cut holes into the body. If there are holes shown on the 1:1 scale body for either intake or output of air then it is allowed to cut them out.

Only bodies that are approved by EFRA will be allowed to race in EFRA GP and EC events. The body must have a EFRA Registration Number moulded in. The cut outs for Group "C" must follow the following definition:

Side windows and rear windscreen may be removed. It is not allowed to bend windows to the outside - all parts of the vehicle must be covered, except:

- a) cooling head of engine
- b) air filter
- c) aerial (max. 10 mm)
- d) outlet pipe of muffler
- e) fuel filler cap
- f) roll-over bar

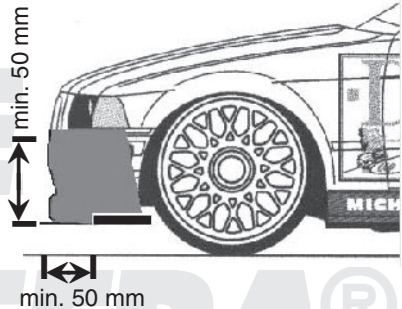
Only if these parts are extending the body. Cut outs for above mentioned parts are to have no more than 10 mm clearance. In addition to this, the following holes are allowed:

- g) for muffler outlet
- h) for fuel filler cap (50 mm when viewed from above)
- i) for radio switch (max. 10 mm)
- j) for spark plug, spark shoe (max. 20 mm)
- k) fuel mixture valve (max 15 mm)

The start numbers must be placed according to the drawing (and the corresponding picture) . For Formula cars the side pots had to be used to fit the starting number. About the design of the Car numbers see 5. General Requirements EFRA Events 5.2.5

5.1.3 BUMPER

- a) A bumper must be fitted to the car chassis.
- b) Bumpers must be designed in a way that they fill the front part of a car body completely. The material used must be flexible like PURIM or other foams that are used in car construction to absorb energy. PURIM type foam min 50 mm height and minimum 50 mm overhang on any solid or semi-solid type flat plate or skid at the front of the car.



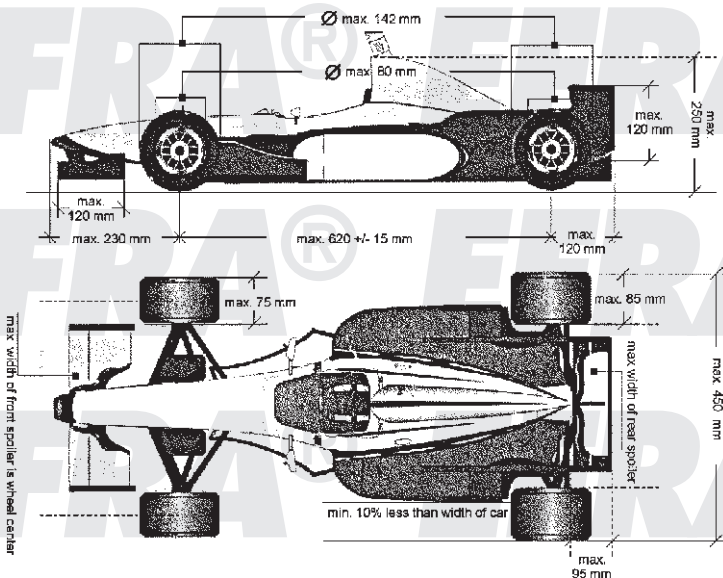
5.2 LARGE SCALE FORMULA

Only Formula one cars following the FIA 2000/1 (or younger) Formula One Regulations are allowed. Bodies must be the model of a existing car from the season 2000/1 or younger. Paintwork and colour is free. The design of the visible suspension parts must have the same appearance than the original F1 cars.

All cut-outs must exist also in the full size car. Cuttings for engine and fuel tank are allowed in the area of the tank seal, starting device and adjusting screws for carburettor i.e. choke, neutral gear etc.

5.2.1 TECHNICAL SPECIFICATIONS

Minimum weight dry	10.000 g
Width Formula maximum	450 mm (incl. tyres)
Height maximum	250 mm
Wheel base	620 mm +/- 15 mm
Tyres front diameter	142 mm +/- 5% = 134,9-149,1mm
Tyres rear diameter	142 mm +/- 5% = 134,9-149,1mm (front and rear tyres must have the same diameter)
Tyre width front minimum	60 mm, max. 75mm



Tyre width rear maximum 85 mm, rear wheels must be min. 5 mm wider than the front wheels
 Rims outside diameter 80mm +/-5mm, indicators must be the same on tyres and rims.

No mixture of +/- allowed

5.2.2 TYRES

Tyres must be semi-pneumatic rubber grooved type (4 grooves) Min. depth 1 mm before the start.

In case of rain the use of rain tyre can be allowed by the race director.

Only 2 complete sets of tyres are allowed for the heats and will be marked by technical inspection with the registration number of the driver.

5.2.3 FRONT SPOILER

Max width 375 mm max. cord 120 mm, /No part of the front wing may exceed the centreline of the front wheels. The front spoiler must be fixed at the chassis, so that it can bend up or down in case of an accident.

REAR WING

The rear wing must fit into a side profile box of 95x120 mm. The number of added wings inside is free. The rear wing must not be wider than the space between the rear tyres.

The front part of the car should not overhang the centre of the front wheel by more than 230 mm. The rear wing and a the diffuser should not overhang the car by more than 120 mm.

The width of the side-pods must be min. 10% less than the overall width. They should not be higher than the tyres.

5.2.4 TANK SIZE, ENGINE RULES, AIR BOX, MUFFLER ETC.

Air box and muffler, tank size, engine rules, etc have to follow Large Scale General Technical Specifications.

Exhaust outlet pipes must exit within the body shell side pods and point down to the track.

5.2.5 F1 WINGS

Front and rear wing are part of the bodyshell of a F1 car and must be repaired immediately if they get damaged or come off the car.

5.3 1:5 Scale TOURING CARS

There is one series to recognise in accordance to the 1:1 scale series namely the Touring Car Championship Series, following FIA class 2 Super Touring Car, FIA Group N and Touring Cars Super 2000.

5.3.1 GENERAL SPECIFICATIONS

The carbody has to comply with the calculated scale dimensions 1:5 with the allowance of using the following tolerances.

Length: within scale +/- 5%
 Width: max. 395 mm measured at the widest point of the bodyshell

Height: within scale +/- 5%

Tank capacity: 700 cm³

Minimum weight, without fuel: 10.000 g

Maximum weight, without fuel: 12.000 g

5.3.2 All 1:5 cars have to be genuine scale in all details and proportions and be a fully detailed model of an existing 1:1 touring race car. If the allowed tolerances are used, then all parts of the model in that particular view have to be within the same sign (wheelbase-, length,- //wheelbase+, length+). Mixtures of car design's are not allowed.

The minimum length of a Super Touring Car is 4.200 mm that gives a minimum length of 798 mm in scale including max.-tolerance.

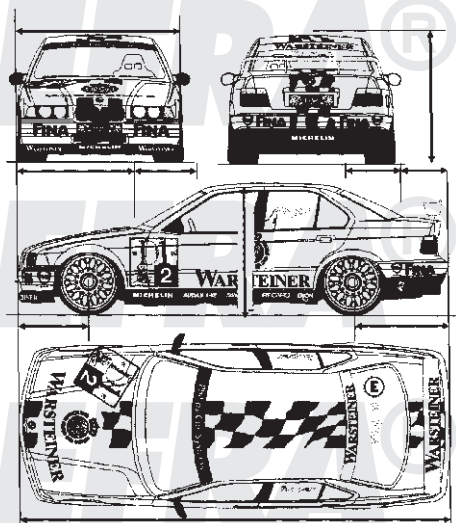
All bodies that are produced world-wide, descend from a original touring car racing and are commercially available, under consideration of Paragraph 5.3, will be allowed.

Only bodyshells that are approved by EFRA will be allowed to race in EFRA sanctioned events. The EFRA-homologation number have to be permanently engraved or moulded in within the space normally used for car-registration numbers at the rear end of the model.

5.3.3 BODY

Bodies have to follow the description in point 5.3.2. They have to be properly fixed to the chassis and must cover the outer edge of the wheels at the centre of the axle when viewed from the top.

It is not permitted to cut the windscreen out. The side and rear windows may be cut out for cooling. It is not allowed



to open them by cutting out only some holes. Also it is not allowed to mould air channels into the side windows to guide air into the interior.

The body shells have to be painted and all windows to remain clear.

All parts of the car have to be covered by the body. Only the radio antenna is allowed to come outside. All openings in the body have also to be in the existing 1:1 race car.

It is not allowed to modify the car-body by cutting it over the marked trim lines or to widen it by heating it or parts of it.

The start numbers must be placed according to the drawing (and the corresponding picture) . For Formula cars the side pots had to be used to fit the starting number. About the design of the Car numbers see 5. General Require-



ments EFRA Events 5.2.5

Only allowed for manufactures:

Aerodynamic modifications at the front, the sides and the rear below the wheel hub centre are free subject to the requirements for ground clearance, overall length and overall width.

The modifications have to correspond to the original. The materials have to be the same as that of the bodyshell. The homologation number has to be engraved. A photo of the modification 1:1/1:5 have to be sent to the responsible Homologation Officer.

5.3.4 GROUND CLEARANCE

The measurement of the body shell height will be made with 6mm ground clearance.

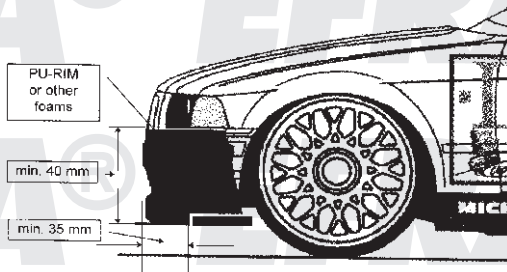
5.3.5 WING/SPOILER

A single rear wing is permitted as long as it does not exceed the front view profile and the length of the car. The wing has to fit in a side "profile box" measuring 60 mm x 60 mm per side and should not overhang the end of the car.



5.3.6 BUMPER

A bumper has to be fitted to the chassis. Bumpers have to be designed in a way that they fill the front of a car body completely and be a minimum height of 40mm. The material used has to be flexible



like PU-RIM or other foams, that are used in 1:1 car construction to absorb impact energy.

At no point may any part of inflexible material for bodyshell mounting protrude from the body more than 10mm.

5.3.7. TYRES

Rim Diameter max.: 107 mm

Rim and fitted tyre Diameter: max.: 136 mm

Rim and fitted tyre width - front max.: 75 mm

Rim and fitted tyre width - rear max.: 80 mm

Only semi pneumatic rubber is allowed. Foam tires are not allowed.

5.4 **Large Scale Off - Road Rules**

5.4.1 Bodies and Wing.

The bodies must be such like used in Off Road, Desert and Trial events. It is allowed to use a wing in the following dimensions

a.) wing body max 300 mm x 140 mm

b.) height max 360 mm suspension fully compressed

c.) Overhang max 150 mm from the centre of the rear axle

5.4.2 Safety.

Cars with open chain drives and gears, to have a protector . There must be a front plastic bumper fitted to the car.

5.4.3 Dimensions.

a.) length max. 820 mm

b.) width max. 480 mm suspension fully compressed

c.) height max. 360 mm suspension fully compressed

d.) weight min 8000 Gramm (8 Kilos)

e.) Fuel tank size max 700 cm³

5.4.4 Engines.

1 Zylinder/2 stroke engine up to 26 cm³ with similar engine rules as Large Scale IC track, regarding liners, cooling, transmission ports, ignition, and the ban of rotary valve and Wankel engines.

5.4.5 Chassis and Transmission.

Only 2 RWD allowed. The transmission gear had to be fixed.

5.4.6 Noise.

The engine had to be equipped in minimum with a 2 chamber pipe who don't exceed the level of 81 dB (A) measured in 10 meters, 1 meter over the ground.

This pipe had to be inside the max dimensions of the car.

5.4.7 Fuel.

To follow 4.1.13.

5.4.8 Brakes.

A car must have brakes to be stopped.

A mechanical failsafe at the carburettor is mandatory. (Spring at the throttle valve)

5.4.9 Race Format.

To be followed Appendix 2. 1:8th IC off road.

Measurements Bodyshells

Tolerances (max.):

Producer / type	Measurements original-racecar				Measurements model scale 1:5					
	min. length	length	width	height	wheelbase	length	width	height	height -5%	Homologation No.
FIA Super Production / Super 2000	395mm ±1,5% min. length 4200mm									
Alfa Romeo 156 2.0	2595	4430	1745	1311	520	886	349	249	249	5029, 5035, 5036
Alfa Romeo 156 2.0 GTA ETCC 02	2610	4430	1815	1311	522	886	372	249	249	5035 am, 5043/04
Audi A4 2.0 STCC 05	2648	4586	1820	1337	530	917	364	254	254	
3er BMW (320/318/318is) E36	2700	4433	1698	1270	540	887	340	241	241	5022
3er BMW 320i E46 ETCC 02/03	2742	4490	1809	1415	548	898	362	268	268	5039/03, 5040/03
3er BMW 320i E90 WTCC 06	2760	4520	1817	1277	552	904	363	243	243	
Chevrolet L'ancêtre/NUBIA WTCC 05	2620	4500	1809	1345	520	900	345	256	256	
Honda Accord Euro R ETCC 04	2685	4665	1831	1325	537	933	366	252	252	5045/04, 5048/06
LADA 21106 WTCC 06	2492	4265	1680	1300	498	853	336	247	247	
LEXUS IS 200 BTCC	2670	4400	1725	1295	534	880	345	246	246	
Mercedes C-Class STCC 05	2715	4806	1828	1350	543	932	366	256	256	
Vauxhall Astra Sport Hatch BTCC 05	2614	4288	1773	1320	523	858	355	251	251	
PEUGEOT 307 ETCC 04	2608	4202	1750	1480	522	840	350	281	281	
PEUGEOT 407 STCC 05	2725	4676	1831	1345	545	935	366	255	255	
VOLVO S60 2.0 ETCC 02	2715	4756	1860	1328	543	915	372	252	252	5041/03
Ford Focus WTCC 05	2640	4342	1840	1340	523	858	340	254	254	
SEAT Leon WTCC 05	2600	4328	1820	1338	520	866	364	254	254	
SEAT Toledo Cupra ETCC 03	2535	4436	1812	1316	507	887	362	250	250	5044/04

All informations without guarantee. Source material: Touring Car World 2003, 2004, 2005 and touring car race series around the world. This list will be continued.

Cars written in *italics* not yet available as models with EFRA-Homologation

Updated: **07.02.2006**

APPENDIX 6

1/10TH I.C. TRACK CARS

1 GENERAL

The EC 40+ for 1/8ths scale will be combined with the open EC for 1/10th IC Track (235mm), (open drivers of all ages).

One special EFRA medal will be awarded to the fastest driver under 17 years of age, so that everybody of 16 years, during the race dates, of younger, can compete for this medal.

2 RACING FORMAT EFRA EUROPEAN CHAMPIONSHIPS AND GRAND PRIX

See point 2.2 till 2.9 Appendix 7: 1/10th 200 MM SCALE IGNITION TRACK CARS

3 TRACK SPECIFICATIONS

See point 3.1 till 3.17 Appendix 7: 1/10th 200 MM SCALE IGNITION TRACK CARS

4 RACE PROCEDURES 1/10 235MM

See point 4.1 till 4.8 Appendix 7: 1/10th 200 MM SCALE IGNITION TRACK CARS

5a TECHNICAL INSPECTION

See point 5.18 till 5.19 Appendix 7: 1/10th 200 MM SCALE IGNITION TRACK CARS

5b TECHNICAL SPECIFICATIONS

5.1. GENERAL ENGINE RULES

The engine shall be air-cooled with front rotary shaft valve. Two stroke induction type and may have a maximum of six (6) gas ports including the exhaust port. The outer edge of the piston must be the highest point of the piston itself, no form of forced induction is allowed or any form variable port timing. Only glow plug ignition is permitted. No holes in the piston are allowed.

5.2. ENGINE DIMENSIONS

Any engine up to max 2.5 ccm allowed.

5.3. FUEL TANK

The fuel tank including filter and fuel pipes up to the carburettor may hold a maximum of 75,00 ccm No loose inserts allowed.

5.4. MUFFLERS

An EFRA homologated muffler, not producing more than 80 dB's at 10 meters distance and 1 meter high on a car equipped with an INS box, must be fitted. In case of water on the track the INS box may not be compulsory. The decision to be made by the race director and published on the result sheet.

This muffler must have the following dimensions:

Tail pipe maximum internal diameter (*)	5,20 mm
Tail pipe minimum length	15,00 mm

The tail pipe must be oriented n or below the horizontal.

(*) This dimension includes a tolerance to account for manufacturing variations in commercially available tubing.

The EFRA homologation number must be engraved on the sidewall of the muffler. The homologation specification (dimensions) of the INS box for scrutinizing purposes can be found at the end of Appendix 8.

5.5. OVERALL DIMENSIONS

	Minimum	Maximum
Wheel base	206,00 mm	280,00 mm
Track width		250,00 mm
Overall length		490,00 mm

5.6. WEIGHT

The weight limit will be checked with the cars ready to race, but with empty fuel tanks and including a transponder.

"15" engine size minimum weight: 1.975,00 grams.

5.7. FUEL

Fuel may only contain methanol, oil/lubricant and nitro methane. The specific gravity of the mixture may not be heavier than 0,87. Based on normal oil densities, this will give a maximum of 16% nitro. Verifying this will be done by a simple floater, called nitromax 16 which is commercially available. If the fuel is not within the specifications of this rule, the driver is immediately disqualified for the rest of the event.

5.8. TYRES

Tyres must be black, except for side wall detailing.

Tyre diameter front	75,00 mm maximum
Tyre diameter rear	80,00 mm maximum
Tyre width front	30,00 mm maximum
Tyre width rear	51,00 mm maximum

No tyres additives or cleaners allowed.

5.9. RIMS

Maximum diameter for front and rear rims is 51,00 mm.

An edge to reinforce the rim on the inside of 2,00 mm thickness and 3,00 mm height is allowed, flange diameter max. 57,00 mm. Any fixing bolts or other equipment installed in the wheel rims, may not extend beyond the exterior of the rim.

5.10. BODIES AND WINGS

GT bodies only. One cooling hole may be cut in the front windscreen with a maximum dimension in any direction of 50,00 mm.

Only the front side windows and the rear window may be removed, partly or totally, other windows must remain clear.

All parts of the vehicle must be covered, except:

- Aerial (max. 10,00 mm).
- Outlet pipe of muffler (reasonable clearance).
Only if these parts are extending the body.

In addition to this the following holes are allowed:

- For muffler outlet.
- For re-fuelling (max. 30,00 mm).
- For glow plug (20,00 mm).
- Fuel mixture valve (max. 10,00 mm).

Rear of the body may not be cut away higher than 45,00 mm, measured with a 10,00 mm spacer under the chassis plate, and rear sidelight details must remain.

Roll-bars must be kept under the body.

Wings are allowed only if fitted to original car, and must be in the original position and may not project above the height of the roof line.

Side dams may be fitted but must be a reasonable representation of those fitted to the original car and may not be wider than 55,00 mm and higher than 25,00 mm, fit in a rectangle with these measurements, and may not project the height of the roof line.

	Maximum
Wing width	230,00 mm
Wing chord	55,00 mm

(20,00 mm extension is allowed, but must be clear and unpainted and still may not project above the height of the roof line).

A level meter should be used to verify that wings and the allowed 20,00 mm extension do not project above the height of the roof line with a 10,00 mm spacer under the chassis plate on level.

Cars must be equipped with a flexible "plastic" bumper to minimize injuries. The bumper may not protrude outside the body.

5.11. GENERAL

The cars will be 2wd of 4wd driven. Mechanically operated brakes must be fitted acting on the rear wheels only. Maximum two speed transmission to be used.

5.12. CLAIMING

Following the main final, the winner's engine may be claimed by another participant of the same final for the total claiming fee equal to the engines retail price, plus 10%.

The written claim must be made to the race director with the cash for the full amount of the claim within 20 (twenty) minutes of the race finish.

If more than one competitor wishes to place a claim, a simple lottery will be used to decide the claimant. All market devices such as heat sinks, motor mounts and air cleaners, are excluded from the claim. If the winner does not wish to surrender his/her engine, he/she must forfeit the race, there will be no protests.

5.13. TELEMETRY

It is not allowed to use any electronic device with the exception of:

- Two radio channels of the receiver which will be used to operate steering, throttle & brakes.
- A passive data recording system to record functions of the car.
- A feedback recording of information system can only be used to the end of controlled practice.

APPENDIX 7

1/10TH 200 MM SCALE IGNITION TRACK CARS

1 ALLOCATIONS FOR THE EUROPEAN CHAMPIONSHIPS

- 1.1. The allocation for the European Championship 1/10th 200 mm I.C. scale will be established by the section meeting and published in the minutes.
- 1.2. For allocation and re-allocation procedures (see general 6.2.). Allocations will only be offered for EC and WC events to those countries that have written to quest places.
- 1.3. All countries receive re-allocations place in the order of the allocation-list, unless stated otherwise in this list.
- 1.4. The number of entries for EFRA EUROPEAN CHAMPIONSHIPS is 120 maximum of 150. Accommodations for at least 120 drivers must be sufficient for all participants.

2 RACING FORMAT EFRA EUROPEAN CHAMPIONSHIPS AND GRAND PRIX

- 2.1. European Championships are held in the following class:
 - a) The European Championship Touring Car Sedan bodies will be held on the 3rd weekend of August. In the year there is an IFMAR world championship. Than dates must be separated with at least 4 free weekends between the finals. It will be open to EFRA licensed drivers. One special EFRA medal will be awarded to the fastest driver under 17 years of age, so that everybody of 16 years during the race dates, or younger, can compete for this medal.
 - b) The allocated dates of the EC may be exchanged by simple majority vote at the AGM in the years that a world championship is being held. Allocations and re-allocations procedure will be fixed at the AGM's section meeting. The format of EFRA GP's could be the same as for the EC, but may be shortened up depending on the number of entrants.
 - c) If there is a world championship 1/10th 200mm IC Track in Europe then there is not a European Championship A organised during that year
 - d) A European Championship for 1/10th IC 200mm B drivers may be organised each year.

To be run if possible the first weekend of May.

Entries will not be allowed for 1/8 scale A licensed drivers, 1/10th 200mm scale A licensed drivers, for the finalists from the EC of the following classes Electric 200mm touring cars, large scale, Electric Buggy, 1/8 Buggy A of the preceding year.

Winner B-EC will retain A-license for 3 years . Other finalists from B-EC are excluded for 2 year to run the next B-EC.
 - e) A & B LICENCE
To qualify for an "A" licence, a driver must be placed 1-30 in the EFRA ranking system. All other applicants will be classified EFRA "B" licensed. These drivers must be approved by their own National Association as having sufficient experience and skill to take part in an International competition.
World Champion will retain "A" licence for the next 5 years.
European Champion will retain "A" licence for the next 4 years.
European Champion B-drivers will retain "A" licence for the next 3 years

The EFRA ranking list for 1/10th IC 200mm is based on the last 2 EC's, the last WC and the best result of one GP in the past year. An EC result is the result of the A EC from August. The total result of this list will decide upon A (start in 2006) and B licence at the end of the season. For all the races involved in this ranking, points can be achieved for the result after the finals (see General rules points table section 3.3.6) . and 50 % of those points for the result after the qualifications. Both results will be added together for the racing. During qualification A and B licensed drivers must be separated in different heats. Winner B -EC will retain A-license for 3 years .

- 2.2. Free practice for EC is only allowed from Monday preceding the race. However pit lane refuelling may be forbidden during free practice at EC.
- 2.3. Free practice for Grand Prix events must be allowed at least from Friday preceding the event (see general 8.2.).
- 2.4. General qualifying format for EC and GP's minimum 4 and maximum 6 series of 5 minutes heats depending on the number of drivers. If there are 60 drivers or less, 6 rounds. If there are > 60 < 80 drivers, 5 rounds. If there are more than 80 drivers, 4 rounds. With everybody qualifying for Christmas tree sub finals and 1-4 qualifying directly to final, depending on time available at Saturday all finals higher than 1/64 will be shorter than 20 minutes (for instances 10 minutes). Duration of finals higher than 1/64 to be set at team managers meeting.

- 2.5. Time schedule. The time schedule should not be rigid but adapted to the number of entrants, as a guideline at EC with 120 or more entrants the schedule should be as follows:

Monday-Thursday	Free or controlled practice.
Thursday & Friday	Technical inspection.
Friday	Controlled practice and 1st series of qualifying in the afternoon.
Saturday	Round 2 till 4, lower finals till 1/64.
Sunday	1/32 finals upwards, practice main final direct qualifiers minimum 10 minutes, maximum 20 minutes between 1/8 and ¼ final; ½ finals final.

The race director should configure the heats based on the EC form last year. The heats shall contain a maximum of 10 drivers. These practice heats will be of 10 minutes duration. The schedule of all practice heats including each practice heat starting time will be carried out by the organization of the event and it should be given tot the team managers & published for general knowledge.

- 2.6. General sub-finals and final formats for EC and GP: the sub-finals are 20 minutes up till 1/64 finals. Time for all finals higher than 1/64th to be set at team managers meeting. The duration of the final is 45 minutes, the best 3 of each sub-final move up to the next final. Following the semi-finals, the best 2 of each semi-final move up to the final, plus the best 2 remaining drivers from the 2 semi-finals combined. When racing conditions are wet in the 2 semi-finals, the best 3 of each semi-final move up to the final. Starting order for the drivers who moved up to the final is based on number of laps and time. In different circumstances it will be number 1 from the A-final who gets the number 5 and the number 1 from the B-final who gets the number 6 etc. Sub-final B even is the first final to start on the Saturday afternoon.
After the first semi final the first five cars will be put in Parc Fermé in technical inspection and the will be released after completion of the technical inspection

- of the 2nd semi final. This will give all drivers that proceed to the final equal time for preparation.
- 2.7. Frequencies for semi-finals and finals are not published and must remain secret. The race director will allocate frequencies to the drivers personally after they have proposed to hem 2 or 3 frequencies. A radio check must be made before the start of the final.
 - 2.8. During qualifying heats only 1 mechanic is allowed in the pit lane. During sub-finals and finals, 2 mechanics are allowed.
 - 2.9. Marshal's for EC's and GP's are compulsory for the sub-finals and final and will be provided by the organizing club. When the organizing club has no marshals to provide for the qualifying heats, drivers must be marshalling.
 - Only drivers may and must marshal the heat following their own. The first heat will be marshalled by the drivers of the first heat.
 - Failure to provide a marshal or competent substitute will result in the loss of the driver's best quality time. A substitute marshal is only allowed if the driver is physically disabled and must be notified to the race director.
 - The organize must provide a marshal for any unfilled position when previous heat had less drivers or marshal missing. Marshals should be posted every 30 meters and supplied with gloves and/or other protection. Other than running marshals all other marshals will remain at their posts at all times during racing. No other persons, except officials are allowed on the track while the race is in progress.

3 TRACK SPECIFICATIONS

- 3.1. Track surface should be unsealed or coarse finish with any joints smoothed.
- 3.2. Minimum length must be 200 meters (advised 240-300 m).
- 3.3. Minimum width of the track will be 4 meter between marking lines. The maximum width is 6,5 meter. The marking lines must be 8-10 cm wide and either white or yellow. They must be approximately 20 cm away from the edge of the racing surface.
- 3.4. Maximum distance from the middle of the drivers rostrum to any point of the track must be 60 meters.
- 3.5. Vision, no obstacles may interrupt the vision form the drivers rostrum to any part of the track.
- 3.6. A broken line may be drawn in the middle of the straight to aid vision. No lines may be drawn in corners other than the marking line.
- 3.8. Track design must include both right and left hand turns, and must have a straight of minimum length of 45 meters.
- 3.9. Outside barriers must provide a positive means of stopping a car which misses a corner or runs out of control. The primary consideration for selection of the outside barriers shall be the protection of the spectators and not the cars.
- 3.10. Inside barriers must deter corning cutting and prevent cars reaching other parts of the track. Inside barriers must be positioned and dimensioned to prevent cars from flying over the outside barrier into the public enclosures. The barriers must be smooth. When cones or dots are used, they should not be higher than 5 cm.
- 3.11. Barriers must be a minimum of 20 cm away from the marking lines on the track.
- 3.12. The inner and outer surrounds to the track must be of grass or other suitable materials such as concrete. The object of these surrounds is to slow down any car that leaves the racing surface. The car must be able to leave the infield of outfield on their own to minimize the need for marshals assistance.

- 3.13. Marshal posts must be positioned at 30 mtr. intervals around the track. They may not obstruct vision of the drivers. The post must be numbered. When a post is located at a dangerous part of the track (i.e. the straight of a fast corner) this post must than provide protection for the marshal (a wall, tyres, a gate, etc.)
- 3.14. A start/finish line must be painted across the track, preferably in front of the time keeping position. The first start line box must be painted more than 10 mtr. away from the following corner.
- 3.15. For Lemans type of starts, 10 numbered boxes will be located on the edge of the track, at an angle of 20-45 degrees to the track, minimum 2 mtr. And max. 4 mtr. apart. The boxes must be 70-100 cm long and 30-40 cm wide (see 3.14.).
- 3.16. Formula 1 Grid start. The grid will be painted on the track, preferable on the straight. The invitations should specify that the formula 1 start will be used. Two rows of numbered boxes will be located on the track with approx. 1.5-2 mtr. space between each row. One side number 1, 3, 5, etc; on the other side 2, 4, 6, etc.
- 3.17. Race directors must use the staggered starting system (see general rules 9). Race directors involved in EFRA sanctioned events may be invited to a briefing meeting, covering interpretation of the rules and management of international races, so that they feel confident to manage a good race.

4 RACE PROCEDURES 1/10 200MM

- 4.1. (See also general race procedures chapter 8). The arrangements of the heats and the numbering is left to the discretion of the organizer. The drivers must stand adjacent to their numbers on the rostrum; the mechanics must remain in their boxes along the pit lane. For all finals, drivers with the lowest starting umbers may choose their position on the rostrum and the mechanics must stand under the driver where this is possible.
- a There must be a 3 min. gap between the end of one heat and the start of the next heat. Also a minimum of 2 minutes must be allowed between the issuance of the transmitters and the start of the heat.
 - b An audible warning will be given at 1 minute and again at 30 seconds prior to the official start, in English and other languages as appropriate.
 - c From 30 seconds till 3 seconds, the cars must be hold at the starting boxes. If a car is not at the starting box at 3 seconds due to unforeseen problems, the car may start from the pit lane after other cars have officially started. The race director and referees will monitor for the abuse of this facility.
 - d From 10 seconds until 3 seconds prior to the start, a second by second countdown will be made in English.
 - e In case of Lemans or formula 1 grid starts at 5 seconds prior to the start, the starter will lower the starting flag and at 3 seconds the flag will be fully down. Mechanics will all step back 1 mtr. The cars must remain in the boxes, no part of the car touching the start line.
 - f From 3 seconds the verbal countdown stops and the actual start signal will be given by the starter after a period o between 0 and 5 seconds has elapsed. If the grid is not tot the satisfaction of the starter, he may require a re-start, re-commencing the countdown from 30 seconds.
 - g The official start signal will be audible by means of a hooter, operated by the starter. This signal will also start the timing systems.
 - h Early starts (i.e. any part of the car touching the starting line) will be penalised with a "stop and go" penalty. The time for this "stop and go" has to be set at the team managers meeting before the actual race starts and will

- have a maximum of 10 seconds. This penalty is issued by the starting official or the time keeping official and must be announced immediately after the start. The penalty will be marked on the result sheet.
- i Under no circumstances will the race be stopped due to a jump start. 10. The starter may only interrupt the race and make a re-start in the event that he considers the starting procedure or the start was not carried out correctly
 - j Delayed start. As long as the starter has not called 30 seconds (the trial lap, see 4.3. is part of the procedure after 30 seconds), any participant of the semi-finals and final may request a delay of 10 minutes to carry out repairs on his car. This delay can be granted only once for each semi-final and final.
 - The track is closed, if the delay is requested as a result of frequency of radio problems.
 - The track is open, if the delay is requested for mechanical repairs or problems. Any driver asking for a delay will start from the end of the grid (11th position to be painted on the track) or from the pit lane in case he is not in time at the grid.
- 4.2. Starting procedure of heats. Starting for qualifying heats will be from the start line using staggered start one by one in the following order:
- | | |
|----------|-------------------------------|
| Round 1: | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 |
| Round 2: | 4, 5, 6, 7, 8, 9, 10, 1, 2, 3 |
| Round 3: | 7, 8, 9, 10, 1, 2, 3, 4, 5, 6 |
| Round 4: | 10, 9, 8, 7, 6, 5, 4, 3, 2, 1 |
- 4.3. Starting for sub-finals and final will be on a Lemans type grid or a formula 1 grid, depending on the track layout, with the faster qualifier starting in front of the slower. During sub-finals and final, a trial lap is driven to avoid frequency problems and to check the transponders. Cars will be released one by one by starter.
- 4.4. 1. All qualifying runs and finals are ran by "time plus next lap" system. Qualifying heats are 5 minutes duration, lower finals and semi-finals 20 minutes and final 45 minutes.
2. When the time is over, an audible signal is given. A car finishes when it passes the finish line after the finish signal is given. The car must immediately return to the pits and may not hinder other cars still racing.
3. In case of doubt (on the finish line when time is over), a car may race one more lap and finish. Whether he finishes or not when time was completed, is up to the time keepers and cannot be disputed.
4. After returning to the pits, the engine must be stopped immediately and the transmitter turned off and impounded.
- 4.5. Qualification order and finals.
- a After all series have been completed, the qualification order is established by taking the best result of each driver.
 - b In case of more than one driver recording identical best results of qualifications, the next best result is taken.
 - c In the case of more than one driver recording identical results in a final, the driver starting with the higher start number is classified as the faster, e.g. if numbers 5 and 5 have equal times, 5 is deemed to have higher final placing.

- d The sub-finals and final are run according to the schedule printed in the official race program, which may only be changed by team managers majority vote.
 - e After all sub-finals and final are completed, a final result list is prepared based on laps and time, bearing in mind the sub-final order. In case of rain see 4.6.
- 4.6. Rain situation. In case of different weather conditions during sub-finals, the final classification will be as follows: place 4 of sub-final A and place 4 of sub-final B will both be awarded place 11th equal in the general classification. Place 5 of sub-final A and place 5 of sub-final B will both be awarded place 13th equal in the general classification. And so on...
- 4.7. Race interruptions.
- 1. In the case of a race which is interrupted for more than 60 minutes for reasons beyond the control of the organisers (bad weather conditions with safety risks for all persons at the meeting), the referees together with the Race-director will decide whether to cancel or continue the meeting.
 - 2. In the case of an interruption of a heat the entire heat will be re-run.
 - 3. In the case of an interruption of sub-final of a final, the following procedure will be used:
 - A. If less than 10 minutes of the final have been run, the results will be cancelled and a new start given for the total time of the final. Vehicles may be repaired before the new start.
 - B. If more than 10 minutes of the final have been run, the results at the moment of the interruption will be kept. The new start will be given for the time which remains to complete the final. The two results will be added to give the final and definitive placing. If the second start cannot be made for any reason, the results from the first part will be used as the final and definitive placing.
 - C. When the interruption takes place after 75% or more of the race is past, the results as at the time of the interruption becomes the final result. At the moment of the interruption of the race, the drivers will leave their vehicles on the start line under the control of the race director. They may switch off the radio and stop the engine. There will be no repairs carried out. Who does not observe this rule will be immediately disqualified.
- 4.8. Rain procedure during qualifying.
- 1. The race director and the referees are jointly responsible for the decision to stop a race in the event of rain.
 - 2. On the result sheets the race director or the appointed official must mark a heat "wet" when the heat was raced under wet conditions. On the corresponding record sheets, this must also be marked. The race director together with the referees will decide in case of doubt. Heats are generally considered to be "wet" when there is any rain or moisture on the track and it is obvious to the race director that the cars cannot perform to their maximum capability. The race director may decide to postpone qualifying if it is likely that qualifying can be resumed within reasonable time.
 - 3. When all drivers have had at least one dry heat, all results will be counted.
 - 4. When weather and time permits, the race director may decide to offer an extra heat to those drivers who did not have a chance to drive a dry heat. (i.e. when most drivers had 2 resp. 3 dry runs, a 2nd resp. 3rd run may be offered to those who had only 1 resp. 2 dry runs.

5. When not all drivers have had a chance to run a dry heat, only the wet results will be counted.
6. When continuation is judged to be senseless or when other drivers should be offered a fair chance to drive under dry conditions, the race director together with the referees may decide to end a heat or cancel a complete heat (4.8.1.).
7. When all drivers have had at least 1 dry heat, the race director will postpone the qualifying until the track is declared fully dry again. If it is likely that this will interrupt the qualifying for more than 1 hour, the race director may decide to open up the track for controlled practice.

5 TECHNICAL SPECIFICATIONS

All measurements referred in this appendix are minimum of maximum values. All measurements for the motor dimensions to be considered with 2 digits behind the comma, all other measurements 1 digit behind the comma. Measurements must be respected within their maximum or minimum values under all circumstances.

- 5.1. The engine may have a total capacity of not more than 2.11 cc. They shall be air-cooled, with front rotary valve, two-stroke induction. They engines may have a maximum of four (4) ports in the liner, including the exhaust port, seen with the piston at lowest position. No form of forced induction is allowed. No form of variable port timing.

Only glow plug ignition is allowed. One additional gap in the bottom (skirt) of the piston is allowed. Additional slits or holes in the liner for cooling purposes are allowed as long as they do not reach the top of the piston at lowest position.

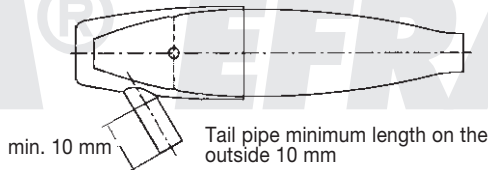
Standard and conical glow plugs allowed.

Where ever we say hole in this rule we mean a hole that is surrounded completely by material.

- 5.2. Engine internal modifications are allowed as long as they are within parameters of rule 5.1.
- 5.3. A maximum carburettor diameter of 5,50 mm.
- 5.4. The fuel tank including filter and fuel pipes up to the carburettor, may hold a maximum of 75,00 ml. No loose inserts allowed.
- 5.5. Overall dimensions.

Minimum (mm)	Maximum (mm)	
Wheelbase	230,00	270,00
Width without body	170,00	200,00
Width with body	175,00	205,00
Length incl. body & wing	360,00	460,00
Height of the top of the roof (measured with a 10 mm spacer under the chassis plate level)	120,00	175,00
Wing width incl. side dams	125,00	200,00
Wing		55,00
Side dams		35,00 x 50,00
Wing overhang (at rear)		10,00
Wheel dia. (excl. tyre bead)	46,00	50,00
Wheel width (incl. tyre bead) and tyre width (across side walls):		
Front:		30,00
Rear:		30,00

- 5.6. Tyres/Rims. Tyres must be black, except for writing on the side walls. Foam and/or rubber tyres can be used. Treatment of the tyres with additives is prohibited. Wheels must be fixed by a screw or nut. The screw or nut installed in the wheel rims may not extend beyond the exterior of the wheel rim. Quick change wheel systems are not allowed. No automatic system to change the wheels allowed (just manpower).
- 5.7. All vehicles must be equipped with brakes and a clutch in such a manner, that the vehicle may be held stationary with the engine running.
- 5.8. Muffler An EFRA homologated muffler of approved double chamber design, including silencer chamber, must be fitted having the following dimensions: Tail pipe minimum length: 10,00 mm (measured from the outside of the pipe). The tail pipe must be oriented on or below the horizontal. The EFRA homologation number must be engraved into the muffler. Each individual car must not produce more than 82 dB, measured at 10 meters distance and 1 meter high. EFRA's definition of a noise is always final.



- 5.9. The front bumper must follow the body contour and must be constructed so as to minimize injury that may result from being hit by a car. The bumper must be made from foam rubber or a flexible plastic material.
- 5.10. The aerial must be flexible. Carbon, metal, etc. is not allowed.
- 5.11. Bodies. Bodies must be a 1:10 scale in character reproduction of vehicles that exist or have existed. Bodies will be checked by the homologation officer. The scrutiny should be done after the following procedure: The manufacturer of a body has to send the body to the homologation officer within the period from December until the 10th of February. Payment procedure for EFRA, homologation remains unchanged. After being checked, the body will get an EFRA number. This EFRA number in combination with the logo of the manufacturer has to be embossed in the body at the right upper edge of the windscreen. At the 1st of March, a list of all homologated bodies will be made available. Only these bodies can be used at EFRA sanctioned events throughout the year. A body which is sent to the homologation officer after the end of February, can only be used in the following year.
- 5.12. List of approved equipment. All lists of approved equipment (i.e. bodies, mufflers and batteries) must be available on EFRA's webpage from the 1st of March every year. This is the final list for that year and no changes will be made before the next year. Equipment homologated during the year will not be put on the list until the 1st of March next year.
- 5.13. The body and spoiler must be made of a flexible material and be painted properly. All windows must remain clear or be semi-transparent. The EFRA number in combination with the logo of the manufacturer must be embossed in the body, at the right upper edge of the windscreen.
- 5.14. The rear of the body may not be cut higher than 50,00 mm measured with a 10,00 mm spacer under the chassis plate on level.

- 5.15. Details of all front and rear lights, grills, air intakes and windows must be clearly contrasted from the surrounded paintwork. No parts of the car except the muffler outlet, may protrude outside of the body shell, when viewed from above. No parts of the car except the antenna, body posts, transponder, may protrude outside the body shell, when viewed from the side wall.
- 5.16. Cuts outs. Only the following holes and sizes are permitted in the body shells/
One (1) cooling hole may be cut in the front windscreen with a maximum diameter of 50,00 mm. Re-fuelling hole: maximum diameter 50,00 mm, the centre of this hole must be the centre of the fuel filler cap, viewed from above.
Note: cooling hole front windscreen and re-fuelling hole may not be combined. Minimum distance between the holes: 5,00 mm. A hole with maximum diameter of 35,00 mm is allowed just above the engine cooling head for easy glow plug access, and can not be combined with any other hole, minimum distance: 5,00 mm. Both front side windows and the rear window can be removed for ventilation, except for the side rear windows, which must remain intact. Small holes can be made for the body posts, transponder, carburettor adjustment and radio antenna (maximum diameter of 10,00 mm). The hole for the exhaust pipe must be of reasonable size. No other holes are permitted. If the re-fuelling hole is part of the front windscreen, then that hole is to be considered also as the cooling hole with a maximum diameter of 50 mm.
- 5.17. Wings and spoilers. One wing and one spoiler may be mounted to any car (if the original full-size car had more, it is allowed to do the same). Wing and spoiler must be made from a flexible material and be painted. Wing and spoiler may not be fixed to body with piano wire. Basically they must be mounted to the body directly. Wing and spoiler must not protrude outside the maximum height and width of the body (incl. the side dams). Rear wings must be mounted in the same place as was intended by the body manufacturer. The overhang must not exceed 10 mm at the furthest point, t be measured from the most rear point of the body. Side dams may be fitted but must be a reasonable representation of those fitted do the original car, fit in a rectangle with the measurements defined, and must not project above the height of the roofline. The height of the wing may be adjusted but the wing, incl. side dams must not extend higher than the roofline. Wings (excl. side dams) are to be of single moulded construction (no flat packs/bend your own).
- 5.18. Checks at technical inspection.
- a) Before the race, all cars will be checked and during the heats the following random checks will be made:
- weight limit
 - muffler
 - motor
 - body and wing, spoiler
 - overall dimensions
- The chassis is to be indelibly marked before the race, and if a driver wants to change it, he must present the new and old to the technical inspection officer.
- b) During sub-finals all cars moving up to the next final plus the next one are to be checked. In addition to the above mentioned checks, the following are to be done during sub-finals:
- weight limit
 - muffler

- body and wing, spoiler
 - overall dimensions
 - marking of the chassis
 - fuel tank capacity
- c) The same checks must be done after the final for the top 4 places.
- 5.19. Fuel may only contain methanol (methyl alcohol) lubricating oil and a maximum of 16% nitro methane in volume. The specific gravity of the mixture may not be heavier than 0,87. An EFRA approved fuel tester, e.g. Nitromax 16 will be available to verify fuel's conformity to the rules at technical inspection.
- 5.20. 4WD and 2WD cars can be used without any technical restriction except those listed in section 5. The use of separate front wheel brakes, except trough transmission is also not allowed (locking of one way bearing is allowed).
- 5.21. The minimum weight without fuel and including a transponder: 1700,00 grams. The weight limit will be checked with the cars ready to race but with empty fuel tanks. The weight will be checked on a digital scale balance and can be done before the start of the heat, sub-final, final or after the end of either. If the weight is found to be under the minimum weight, the driver should be disqualified from the heat, sub-final or final.
- 5.22. The cars shall be measured for width by placing it on a baseboard equipped with two side rails of 20 mm height spaced 200 mm apart, constructed in such a way, that the car can roll freely between them. Baseboard and rails must be constructed of high quality board suitably stiffened to prevent distortion. The car must roll freely between the side rails with any steer able wheel set in straight ahead position without any part of the wheels, bumper, body shell or any other part of the car touching the side rails irrespective of the compression or extension of the suspension. The car shall be measured for length and height in a similar constructed box of internal dimensions 460,00 x 175,00 (incl. 10 mm spacer). Measurement of the wheel base may be made by simple measurement of axle centre distance, but race directors should be prepared to make more exact checks in case of doubt or protests. It is suggested that the wheels are removed and the wheel spindles firmly placed on V blocks whilst accurate measurements are made. It is the responsibility of the driver to ensure that his car complies with the regulations at all times, that it is on the track and the organizer may check any car for compliance with the regulations at any time during the race meeting. If a car is found to exceed the limits of dimensions on checking immediately after a race, positive proof of race damage may prevent disqualification.
- 5.23. Roll bars (roll over bars) must be kept under the body.
- 5.24. Only two (2) servos are allowed.
- 5.25. Its not allowed to use any electronic parts for traction control and braking control with ABS which can control the power by means of a feedback system. It is not allowed to use any form of telemetry with active transmission.
- 5.26. All measurement referred to these rules are maximum or minimum values.
- 6 PENALTIES**
- 6.1. Referees must issue a verbal blue flag warning to slower drivers or to make drivers that are not within the same lap as the car that is about to pass him, to make way and not to obstruct the passing car. This warning must be announced "attention driver (name)".
- 6.2. Failure to respond to the verbal blue flag will result in an official warning and the driver must make a mandatory pit stop for 10 seconds. During this

mandatory stop, the referee will administer the official warning directly to the driver. In the case that there is no possibility to call a driver for a stop and go penalty, the referee and/or race director will announce a time penalty of 10 seconds.

- 6.3. Any driver who is given two (2) official warnings will be immediately disqualified from the entire race.
- 6.4. Deliberate waiting for other cars will be treated as a verbal blue flag offence, a stop and go penalty issued. The referee will advise the driver that this behaviour has been noted and that he should race normally. Failure to follow the referees instructions will result in immediate disqualification. In the case that there is no possibility to call a driver for a stop and go penalty, the referee and/or race director will announce a time penalty of 10 seconds.
- 6.5. Deliberate obstruction of other cars in an attempt to influence the results of a race, will lead to immediate disqualification and loss of his/her international license until after the next event of the same kind (e.g. GP/EC/WC).

APPENDIX 8

HOMOLOGATION OF MUFFLERS

1. GENERAL

For each class there are different levels/procedures for homologation.

Anyone who wishes to have a muffler tested and homologated must submit 2 samples and a drawing before December 1st to the muffler homologation officer.

Mufflers will be tested between December 1st and february 28th and will be put on the EFRA webpage for publication on March 1st.

After publication no other mufflers will be added to the list before the end of the running year.

1.1 1:8 IC muffler rules

Each new muffler must be of a 3-chamber type and will be tested with an engine equipped with an inlet silencer (according to EFRA rules). Up till 40.000 RPM the muffler may not produce more then 82 dB, measured at 10 meters distance and 1 meter high.

1.2 1:10 IC Track

Each new muffler must be a 2-chamber type and will be tested with an engine equipped with an inlet silencer (according to EFRA rules). The muffler may not produce more then 82 dB, measured at 10 meters distance and 1 meter high.

2. HOMOLOGATION FEE

will be: see General Rules 3.5.7.

If a second test is necessary an additional cost of: see General Rules 3.5.7..

3. HOMOLOGATION NUMBER:

every accepted muffler is issued with an EFRA homologation-number which must be indelibly marked on the side wall.

4. TECHNICAL DETAILS

A very important factor in the control of the noise level of a muffler is the design of the mandatory 2nd chamber and the total length of the outlet pipe.

The first cone may be trimmed by the individual user within a small range to set up the best total system length.

The first cone may be trimmed by the individual user within a small range (max. 5 mm) to set up the best total system length.

5. TOLERANCES

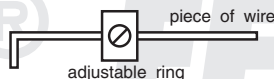
Recognising that the component parts of a muffler are joined together, it is quite clear, that there may be some slight differences in total measurements.

This will not lead to dramatic noise level variation, but one important point must be mentioned:

The 2nd cone must be in line with the outlet pipe, if this is a feature of the original design. To check this, refer to the drawings.

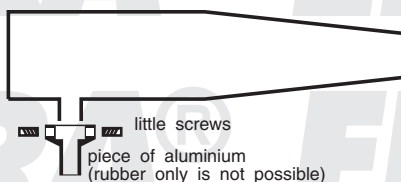
The outlet pipe may have a minus-tolerance of 2 mm.

To the total length of the outlet pipe use a tool similar to that shown below.



6. PRACTICAL TIP

Some drivers cut the outlet pipe, because they fear damage during the race. Of course this is not allowed. To help in such a case, here is a tip:

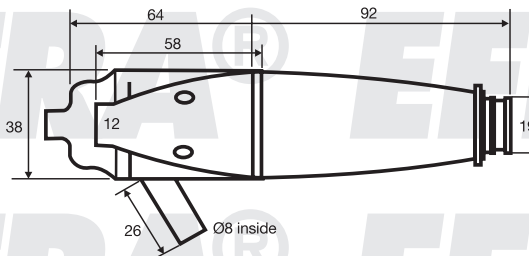


7. EFRA APPROVED MUFFLER

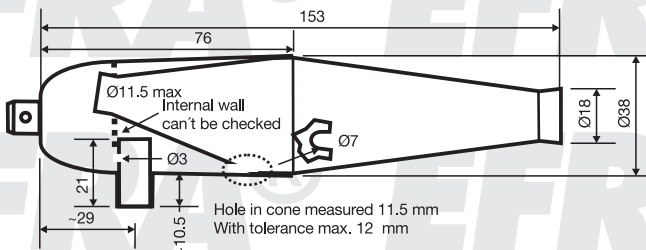
The following mufflers do comply with the 2001 noise rules .

Nr.	Manufacturer	Remarks
EFRA9901	NovaRossi	
EFRA2001	CR France	
EFRA2002	Picco	
EFRA2003	Swiss Power	
EFRA2004	CR France	
EFRA2005	Cipolla	
EFRA2006	NovaRossi	51109/51009/51059/mega/r&B
EFRA2007	LM 3 chamber Sirio	
EFRA2009	Rossi	
EFRA2010	OPS-RC Power	OP37970
EFRA2011	Mielke	1202P
EFRA2012	BP	
EFRA2013	Sirio	
EFRA2014	Bergonzoni	
EFRA2015	NovaRossi	51010/51110/51060
EFRA2017	Max power	
EFRA2018	Max power SP	
EFRA2019	Golden Lion Enterprise	Off-Road SA 208
EFRA2020	R&B	off-road / R&B003
EFRA2021	Schepis Italy	
EFRA2022	Axe Rossi	
EFRA2023	SPM	B type
EFRA2024	SPM Off-road	L type
EFRA2025	LRP	off-road
EFRA2026	IDM	
EFRA2027	RCMC	off-road
EFRA2028	RC Power / OPS	OPS37941
EFRA2029	Radiosistemi	RC1
EFRA2030	Radiosistemi	RC2
EFRA2031	Radiosistemi	RC3
EFRA2032	Radiosistemi	RC4
EFRA2033	Picco / Mega	type A
EFRA2034	Technokit	
EFRA2035	Thunder Tiger	1796

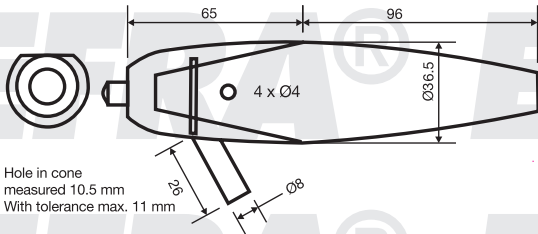
EFRA2036	Max Power	
EFRA2037	ATS	
EFRA2038	Picco/Mega	Type B
EFRA2039	Thunder Tiger	1797
EFRA2040	AxeRossi	Schumacher
EFRA2041	Mielke	2500
EFRA2042	OS Engines	T-2060SC
EFRA2043	OS Engines	T-2060
EFRA2045	R&B	
EFRA2046	Picco	69/3 chamber
EFRA2047	Hong Nor	
EFRA2048	Radiosistemi	
EFRA2050	Axe Rossi	type B
EFRA2051	R&R Non Solo Racing	
EFRA2052	NovaRossi	51011/51061/51111
EFRA2053	GRP Gandini	21-01
EFRA2054	GRP Gandini	21-02
EFRA2055	GRP Gandini	21-03
EFRA2056	Sirio	buggy 2006-1
EFRA2057	Sirio	buggy 2006
EFRA2058	Sirio	pista 2005-2
EFRA2059	Ho Bao	buggy
EFRA2060	Shengine	buggy
EFRA2061	Mielke	
EFRA2062	Hongnor	buggy
EFRA2063	LRP	buggy, same as SH
EFRA2064	DI Monaco Model	
EFRA2065	Orion	SRP21
EFRA2066	Orion	SRB21



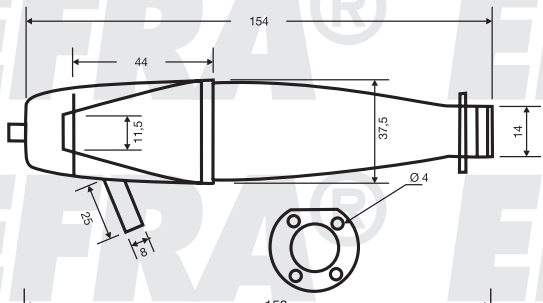
EFRA 9901
Novarossi



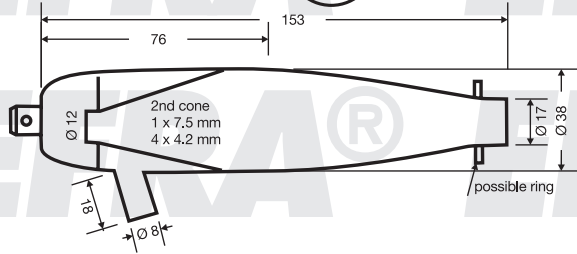
EFRA 2001
CR France



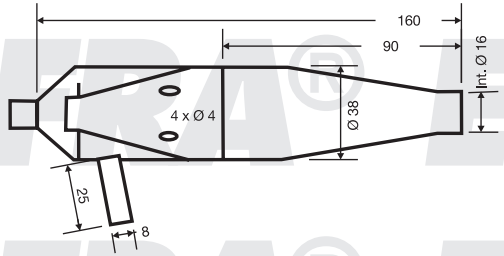
EFRA 2002
Picco



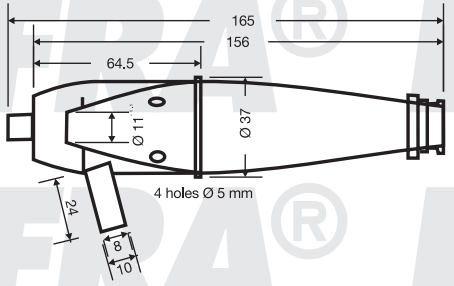
EFRA 2003
Swiss Power



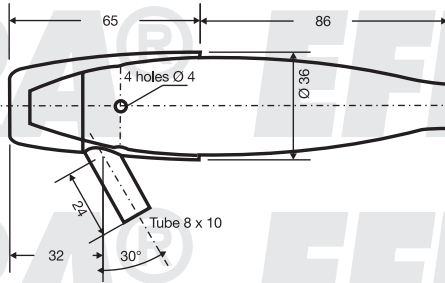
EFRA 2004
CR France



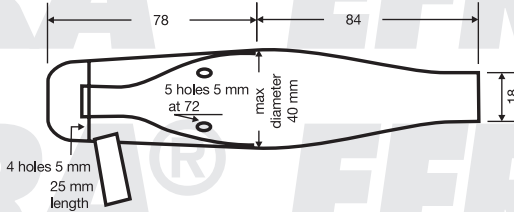
EFRA 2005
Cipolla



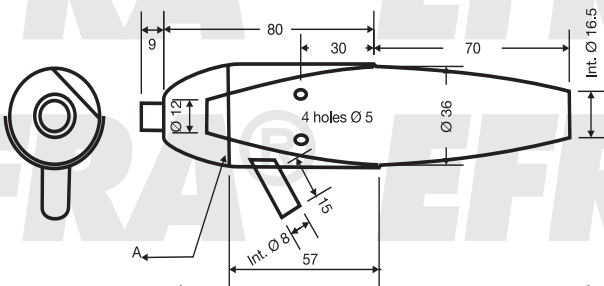
EFRA 2006
NovaRossi
51009



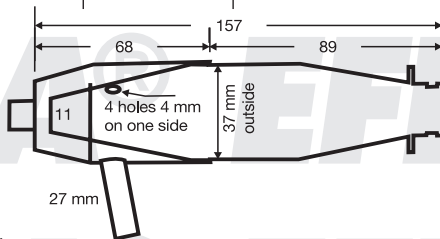
EFRA 2007
LM/Sirio



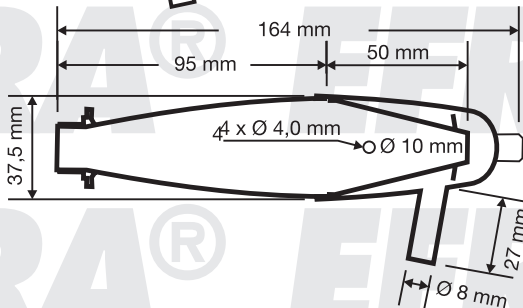
EFRA 2009
Rossi



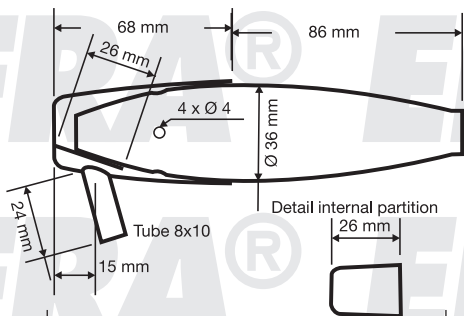
EFRA 2010
RC-Power/
OPS OP37970



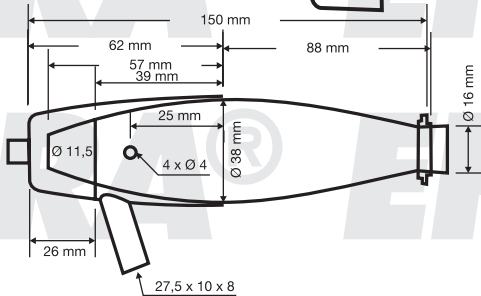
EFRA 2011
Mielke 1202P



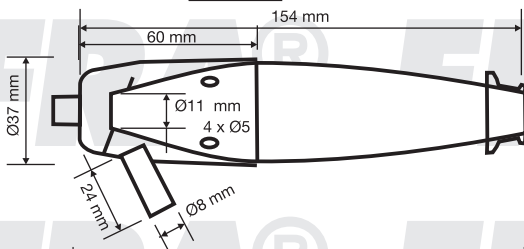
EFRA 2012
BP Racing



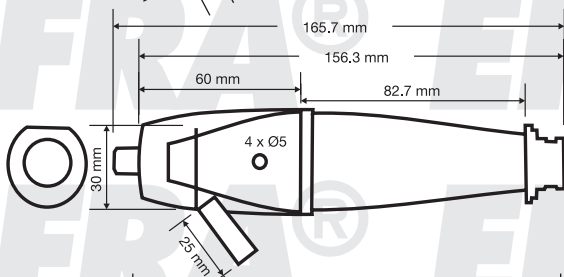
**EFRA 2013
Sirio**



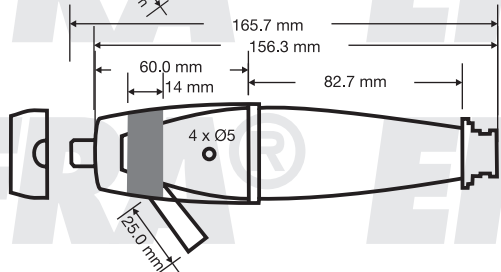
**EFRA 2014
Bergonzoni**



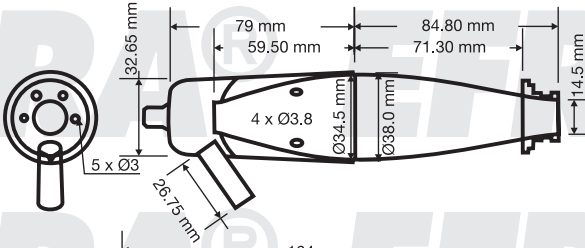
**EFRA 2015
NovaRossi**



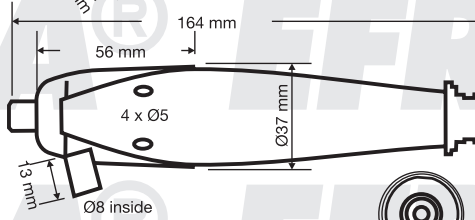
**EFRA 2017
Max power**



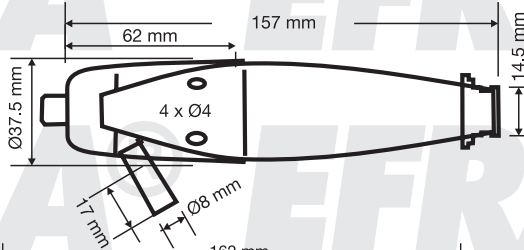
**EFRA 2018
Max power**



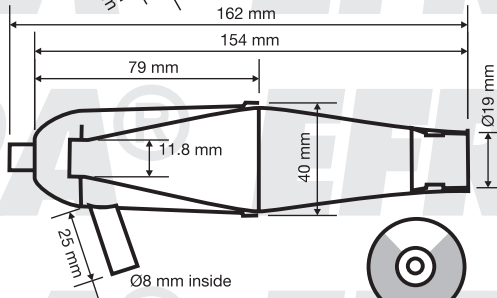
EFRA 2019
Golden Lion
Enterprise



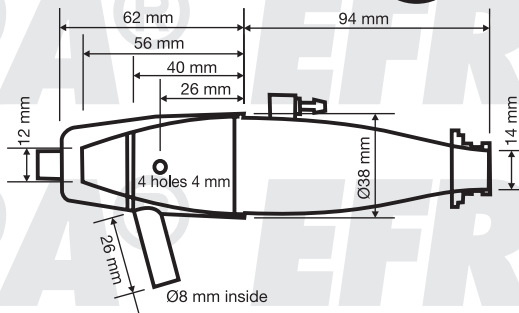
EFRA 2020
R&B



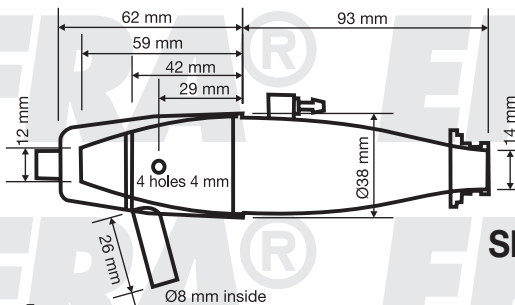
EFRA 2021
Schepis



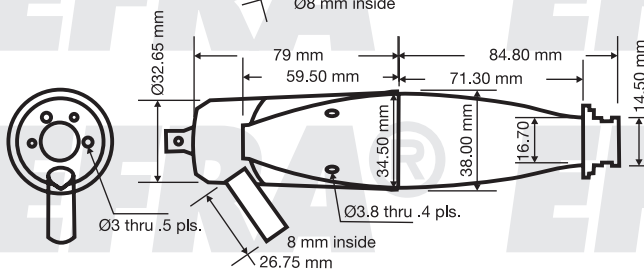
EFRA 2022
Axe Rossi



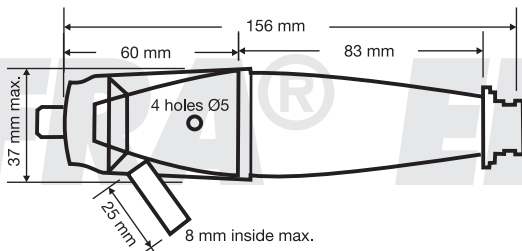
EFRA 2023
SPM



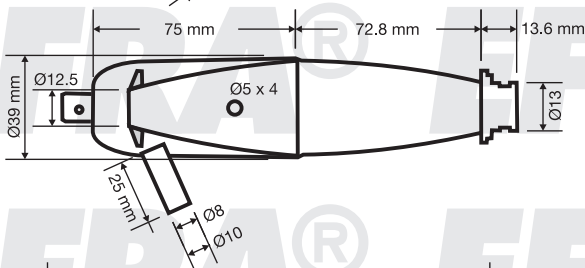
**EFRA 2024
SPM Off-Road**



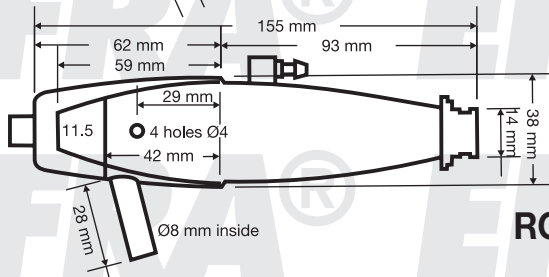
**EFRA 2025
LRP**



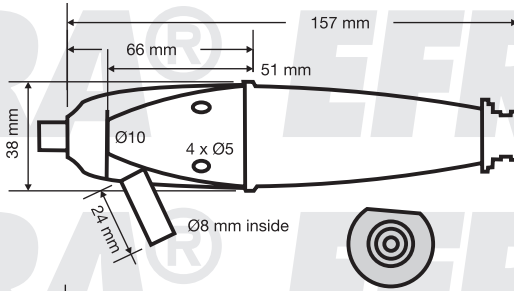
**EFRA 2026
IDM**



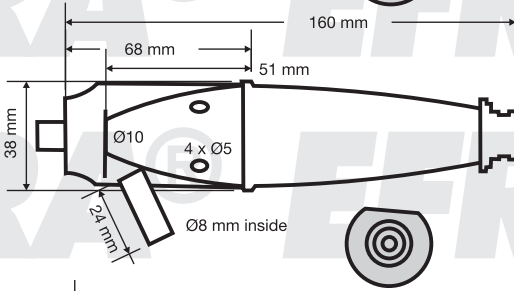
**EFRA 2027
RCMC**



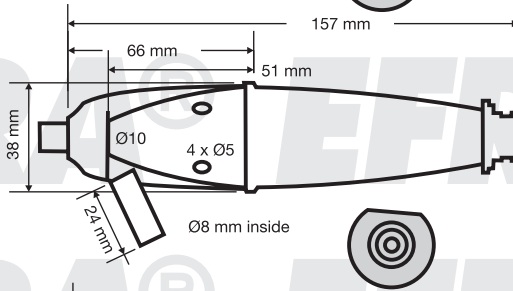
**EFRA 2028
RC Power/OPS**



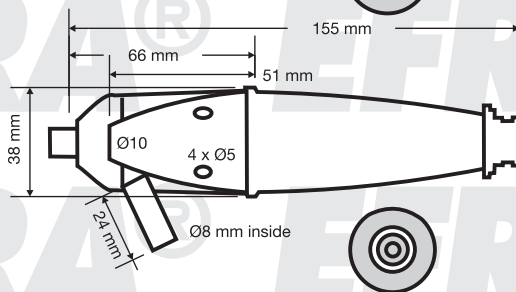
EFRA 2029
Radiosistemi



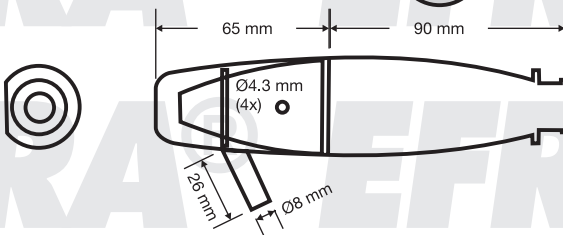
EFRA 2030
Radiosistemi



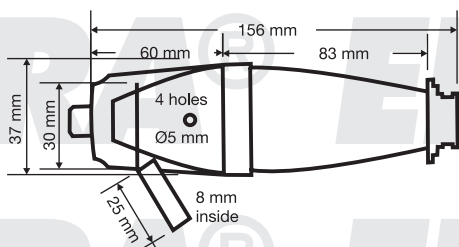
EFRA 2031
Radiosistemi



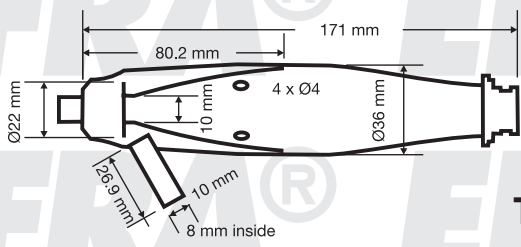
EFRA 2032
Radiosistemi



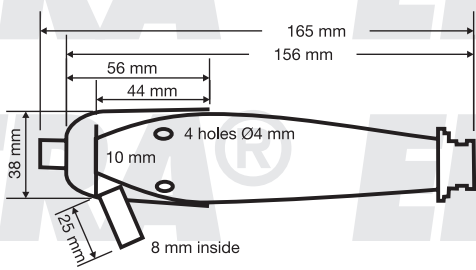
EFRA 2033
Picco/Mega



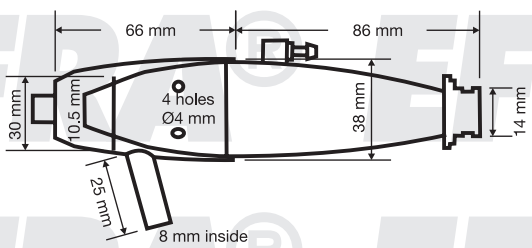
EFRA 2034
Technokit



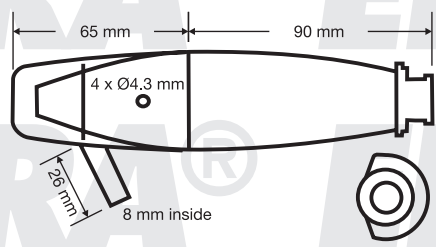
EFRA 2035
Thunder Tiger



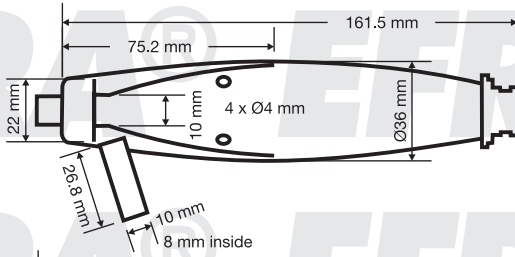
EFRA 2036
Max power



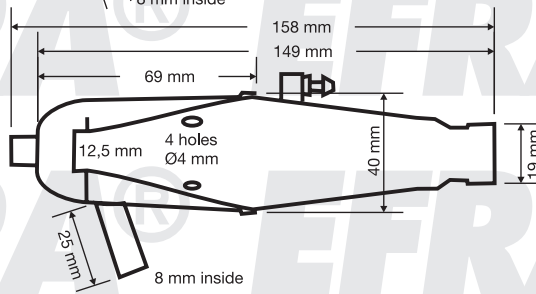
EFRA 2037
ATS



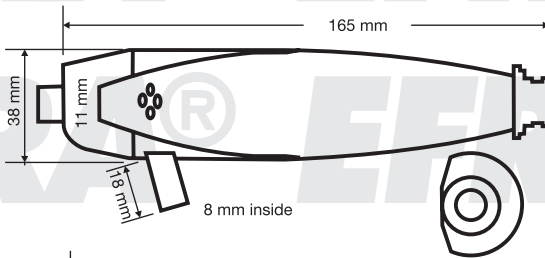
EFRA 2038
Picco/Mega



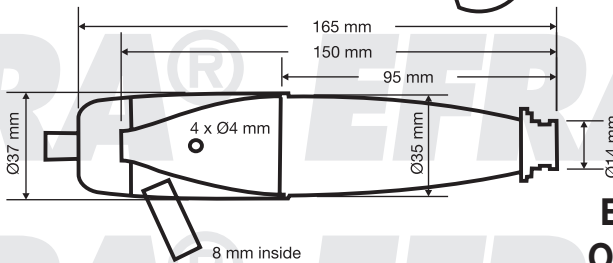
EFR 2039
Thunder Tiger



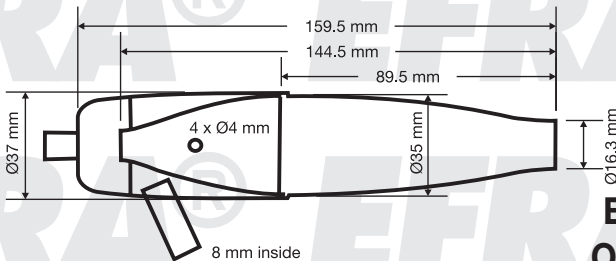
EFR 2040
Axe Rossi



EFR 2041
Mielke



EFR 2042
OS Engines



EFR 2043
OS Engines

8. INS box dimensions.

The performance of the INS box is based on its form and measurements. Therefore it is strictly forbidden to change anything on its internal dimensions.

The INS box for 1:8 and 1:10 are the same, only the foam filter has another dimension to fit the carburettor. Homologated INS boxes:

Serpent box

Picco box

Mielke box

NovaRossi box

Mielke modified (modified with 2 x 4 holes 4mm inside)

8.1 Definitions:

The "Serpent" INS box has the following dimensions:

The box has 30 holes inside. There are 2 different holes: 1 straight hole with a diameter of 2.4 mm and then 2 holes where the smallest diameter is also 2.4 mm but on the bottom it is wider.

The Picco INS box has the following dimensions

The box has 26 holes inside with a diameter of 2.8/2.9 mm

The MID/Mugen INS Box has the following dimensions:

2 tubes with a internal diameter of 8.8mm, +/- 0.1mm.

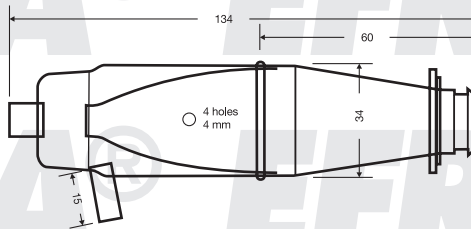
The average length of both tubes is 29mm.

Total height of the box 40mm, +/- 0.5mm, diameter 43 mm, +/- 0.5mm

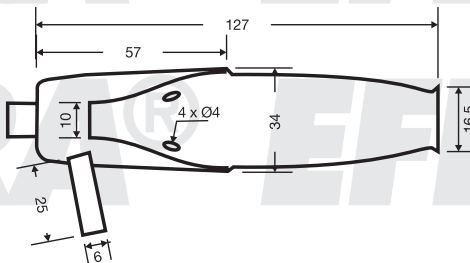
9. 1:10 IC track muffler list

Nr.	Manufacturer	Remarks
EFRA 2501	Mielke	
EFRA2502	R&B	1850/1851
EFRA2503	NovaRossi/Mega	51220 / 2680/2691
EFRA2504	Picco	
EFRA 2505	CR France	
EFRA2601	NovaRossi	51608/51628/51618
EFRA2602	Max power	
EFRA2603	Associated	
EFRA2604	R&B	1751-401 and 401K
EFRA2606	RCCpower	STS-12271-E inline version
EFRA2607	Picco	
EFRA2608	Rossi, Axe	
EFRA2609	Mugen	
EFRA2610	Mielke	Associated type
EFRA2611	Sirio	2003
EFRA2612	Sirio	2004
EFRA2613	Habbecke	HA optimized, 2501 with larger cone
EFRA2614	Schepis	
EFRA2615	Max	2602 with other rear cone
EFRA2616	CR France	2505 with a small change
EFRA2617	IDM	
EFRA2618	Technokit	
EFRA2619	Picco	
EFRA2620	Radiosistemi	
EFRA2621	ATS	
EFRA2622	SPM	
EFRA2623	Team magic	

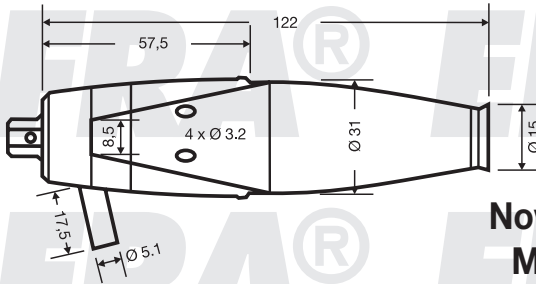
EFRA2624	Mielke	1910P
EFRA2625	Team Magic	
EFRA2626	Mielke	OR-1000
EFRA2627	R&R Non Solo Racing	
EFRA2628	LRP	
EFRA2630	NovaRossi	51610/51620/51630
EFRA2631	GRP Gandini	12-01
EFRA2632	GRP Gandini	12-02
EFRA2633	GRP Gandini	12-03
EFRA2634	Team Orion	LTPT-2602 A6
EFRA2635	Team Orion	LTPT-2602 B6
EFRA2636	Team Orion	LTPT-2602 C6
EFRA2637	Team Orion	M-type 6
EFRA2638	Team Orion	R-type 6
EFRA2639	Kyosho type A	VZW217 & VSW053
EFRA2640	Kyosho type B	VZW218 & VSW054
EFRA2641	Serpent Mega	203051
EFRA2642	Vantage	carbon fiber pipe, various types, same basic pipe
EFRA2643	Fioroni	RC50
EFRA2644	LRP	
EFRA2645	Graupner	90.043.111
EFRA2646	Graupner	GM-Racing CP-Tuning
EFRA2647	Orion	



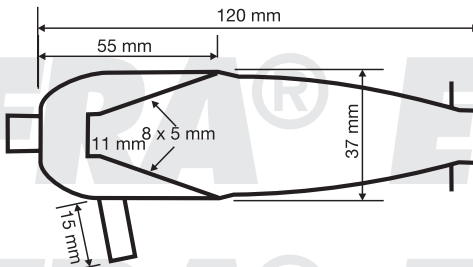
EFRA 2501
Mielke



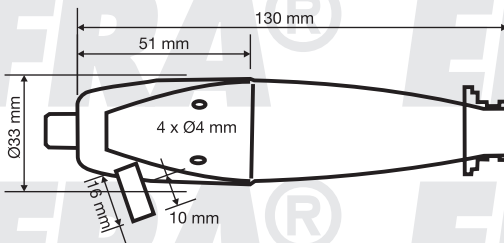
EFRA 2502
R&B 1850/1851



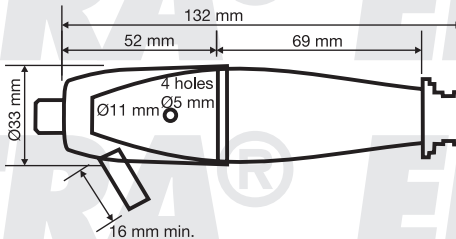
EFRA 2503
NovaRossi 51220,
Mega 2680/2691



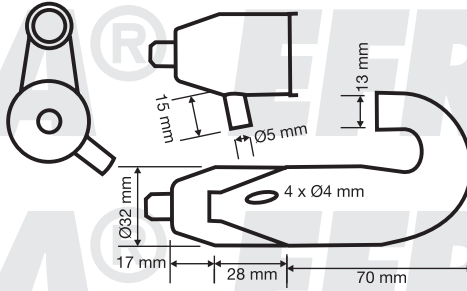
EFRA 2504
Picco 7078



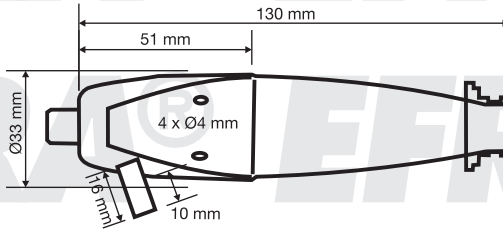
EFRA 2601
NovaRossi



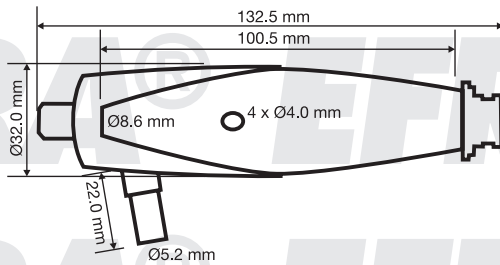
EFRA 2602
Max power



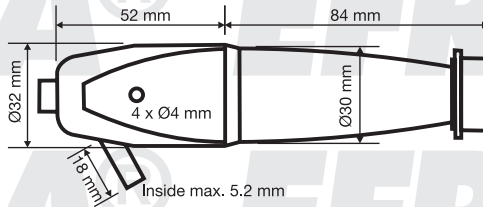
EFRA 2603
Associated



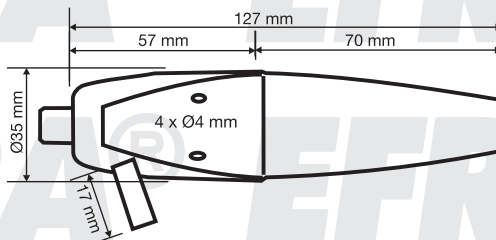
EFRA 2604
R&B



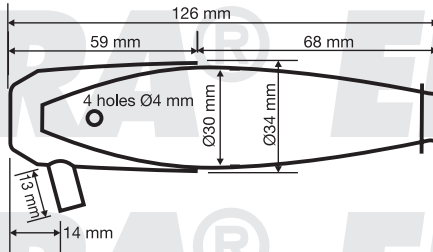
EFRA 2606
RCC power



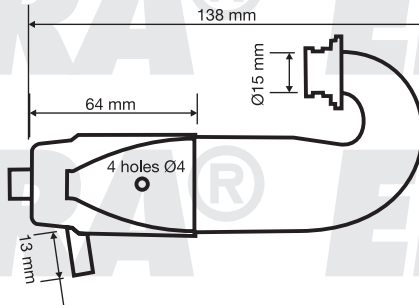
EFRA 2607
Picco



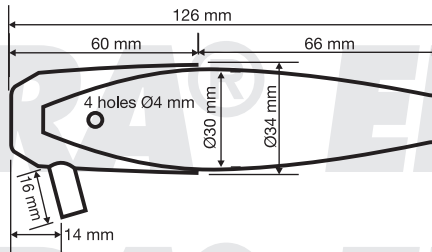
EFRA 2608
Axe Rossi



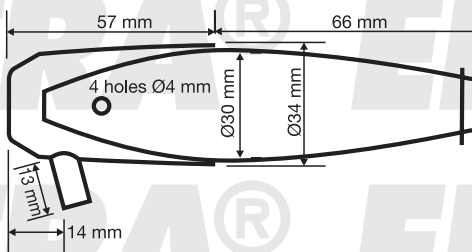
EFRA 2609
Mugen



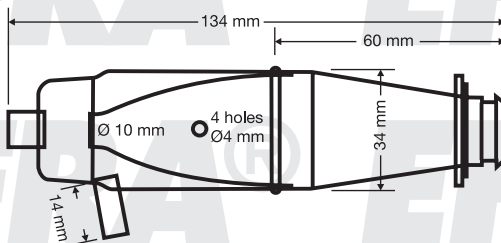
EFRA 2610
Mielke



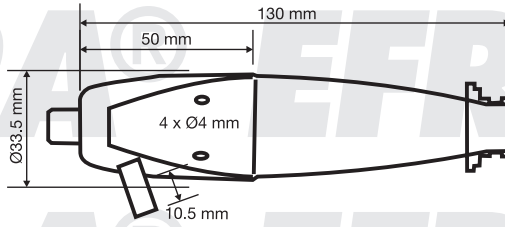
EFRA 2611
Sirio



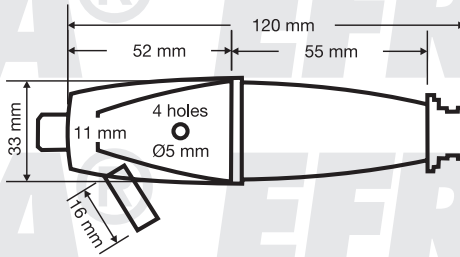
EFRA 2612
Sirio



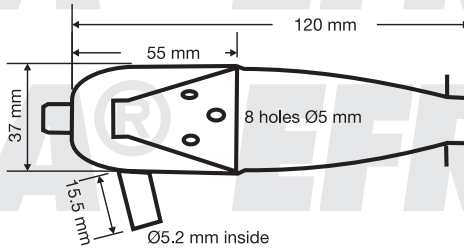
EFRA 2613
Habbecke



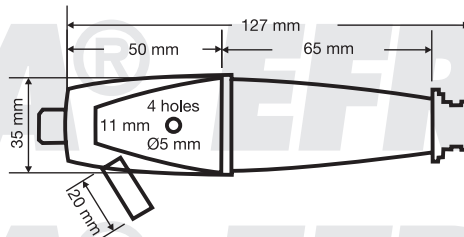
EFRA 2614
Schepis



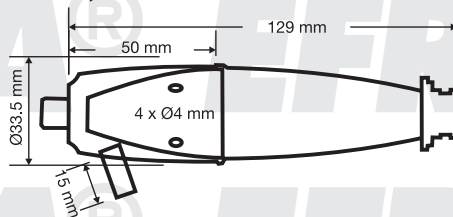
EFRA 2615
Max Power



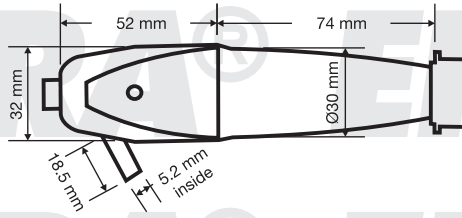
EFRA 2616
CR France



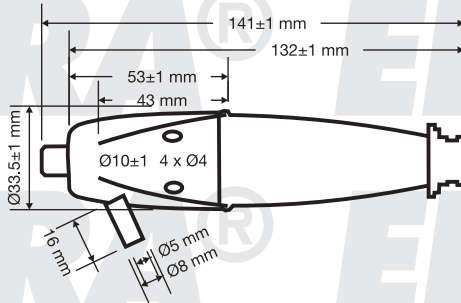
EFRA 2617
IDM



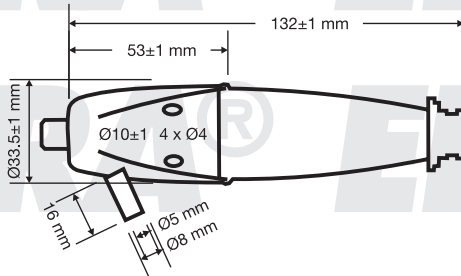
EFRA 2618
Technokit



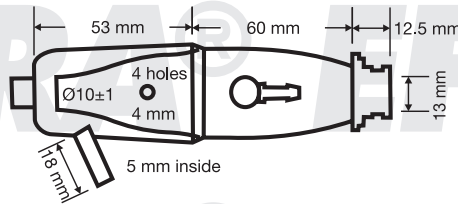
EFRA 2619
Picco



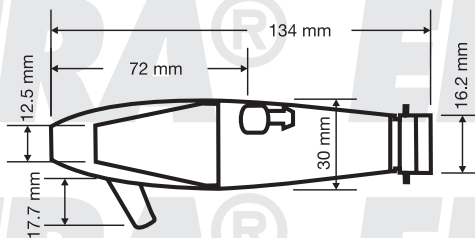
EFRA 2620
Radiosistemi



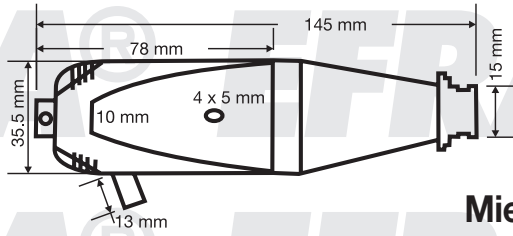
EFRA 2621
SPM



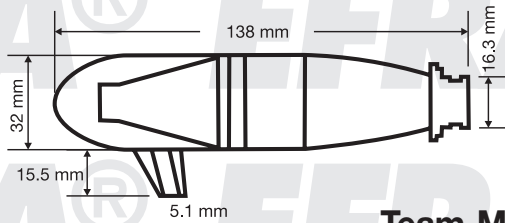
EFRA 2622
SPM



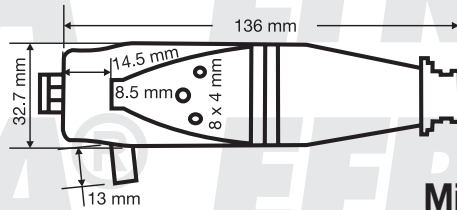
EFRA 2623
Team Magic
Factory K



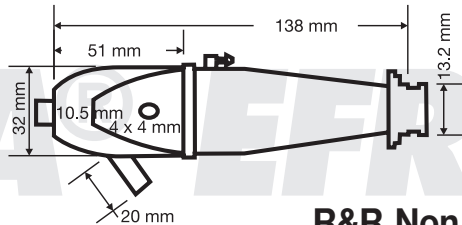
EFRA 2624
Mielke 1910 P



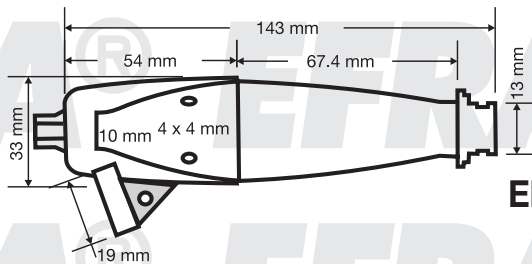
EFRA 2625
Team Magic Shark



EFRA 2626
Mielke OR-1000



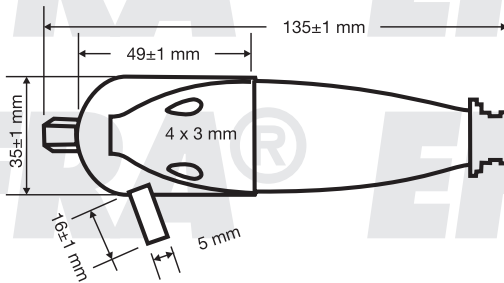
EFRA 2627
R&R Non Solo Racing



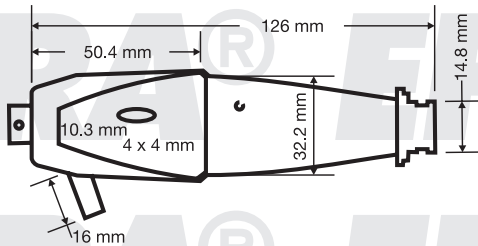
EFRA 2628
LRP

EFRA[®] raw EFRA[®]
Applied

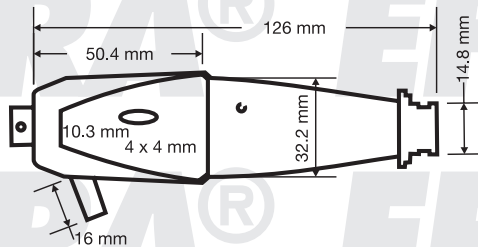
EFRA 2629
RC Power



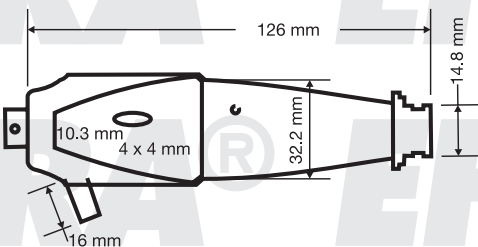
EFRA 2630
Novarossi



EFRA 2631
GRP 12-01



EFRA 2632
GRP 12-02



EFRA 2633
GRP 12-03

APPENDIX 9

PROCEDURE FOR BODY-APPROVAL (1/8 TRACK, 1/10 TRACK, ELECTRIC TRACK & LARGE SCALE)

1. Any manufacturer, who wishes to submit a bodyshell for homologation must first contact the EFRA Treasurer who will invoice them the required amount and forward to them, together with the invoice, the EFRA Bodyshell Homologation Form. Sanction Fee will be set at the EFRA Annual General Meeting.
 - 1.a. Bodies for 1:10th, 1:8 class and Electric Track.
Anyone who wishes to have a body tested and homologated must submit 2 samples before December 1st to the body homologation officer.
Bodies will be checked and verified between December 1st and february 28th and will be put on the EFRA webpage for publication on March 1st.
After publication no other bodies will be added to the list before the end of the running year.
2. All manufacturers must submit the following to the EFRA Homologation Officer (DO NOT SEND BODY SHELL TO THE TREASURER):
 - a) The completed EFRA Homologation Form
 - b) Pictures of original 1/1 car body from two of the following three elevations.
 - top
 - front end
 - rear end
 - side
 - c) Any other information that may be necessary
e.g. Race results for real car races
Manufacturers data for production cars
 - d) TWO examples of the model body from the final tool with all character lines and other elements present. This will be retained for referral. All wings custom designed for the body must be included.
 - e) For Large Scale models it is only necessary to send 1 (one) example of the body shell. Drawings and photographs will be retained by the Homologation Officer as proof of the homologation. Bodyshell must be clearly marked (stamped or engraved) with the homologation number.
 - f) All Bodies currently on the EFRA approved list will remain legal for five years or earlier removed.
3. Upon receipt of the above items, the Manufacturer will receive a confirmation from the Homologation Officer with the date of receipt. If any of the above items are missing, or photographs or other data are considered by the Homologation Officer to be of insufficient quality, homologation will be refused. The reason for refusal will be given.
4. Within one month of confirmation of receipt, subject to confirmation from the EFRA Treasurer that the sanction fee has been paid, the Homologation Officer will either:-
 - a) Approve the body, when the model body is an acceptable representation of the original.

OR

- b) Refuse homologation, when the differences from the original are too great.
 If the body shell is refused the reason for refusal will be stated.
 Each homologated body will have a unique EFRA number, even if the same type of bodyshell is already approved for a different manufacturer. The EFRA number must be set in an area immediately adjacent to the cockpit, preferably in front of the windscreen. Body homologation number must be visible at time of technical inspection. Therefore manufacturers must place the number in an area of the body which will not be cut out. (Bonnet in front of the driver, front spoiler, windscreen)
- All shells with separate customised wings must have the homologation number moulded into all parts of the wing as well as the body. The wing must be submitted for homologation at the same time as the body for which it is intended to be used. The wing may only be used with the shell with which it was homologated.
5. The homologation period lasts for five years, after which the body may be resubmitted, provided it still satisfies all regulations concerning the individual body class and is still in use.
 6. The manufacturer may, if he wishes send a preliminary example of the model body to the Homologation Officer for interim advice. The body need not be taken from the final tool but all character lines and other details must either be moulded on or marked on the body in pen.
 Photographs etc. must be enclosed as in the full homologation procedure. The Homologation Officer will give a non-pretudicial opinion on whether the body would be homologated in finished form. If he decides that the body would not be approved, he may, if he wishes, give specific reasons. A fee to cover expenses will be charged for this service. Fee to be set at the EFRA Annual General Meeting.
 7. Once approved, the tool must not be modified in any way. Should the tool be modified, the EFRA number must be filled in and an example of the modified body submitted to the Homologation Officer for full re-submission.
 8. All information and examples of 1/8 scale bodies sent to the Homologation Officer will be retained during the homologation period of five years. All examples of large scale bodies sent to the Homologation officer will be sent back to the manufacturer with the homologation number engraved in. The manufacturer has to retain the example body during the homologation period of five years. If the Homologation Officer suspects that a body has been modified post-homologation he may anonymously purchase an example of the body for checking. If he finds that the body has been modified it will be immediately removed from the approved lists.
 9. All bodies currently on the EFRA approved list will remain legal for five years from date of homologation.
 10. EFRA Homologation Officer:

1:8 Scale Homologation:

Gerhard Binder
 Schönbrunnerstr. 159
 A-1120 Wien
 Austria

1:4 Scale Homologation:

Wolfgang Stumpf
 Franz Josefsring 16
 A-2500 Baden
 Austria

1:5 Scale Homologation:

Wolfgang Petermann
Am Ried 9
D-61273 Wehrheim/Ts.
Germany

1:10 IC Scale Homologation:

Gerhard Binder
Schönbrunnerstr. 159
A-1120 Wien
Austria

Electric Track Homologation:

Gerhard Binder
Schönbrunnerstr. 159
A-1120 Wien
Austria

11.

Special Homologation rules for 1:8 scale.

The body must be a replica from an original race car.

Cars must have raced in either Sports Can Am classes, Proto-type, Group-C, Le Mans, American Le Mans or GT1/GT2 classes.

Once homologated by the homologation officer the name of the body can be changed to a name or production reference from the manufacturer. This name or reference will be used at the EFRA body list.

The rear of the body after the rear axle is free and does not have to be within the measurements of the original.

The following differences from the original are allowed;

Side dams on the model after the rear axle may not be higher than 40 mm.

Side dams from the front axle till the rear axle may have the following dimensions;

From front axle over the first 150mm, not higher than 8 mm and not more than 20 mm over the next 100mm.

Behind the driver the body may be adapted to suit fuel tank. Driver may be moved slightly to the front or to the left or right to avoid conflicts with tank. Driver may not be cut because of fuel tank opening.

All bodies will have the EFRA number engraved into the body at such a place that it is visible all the time.

For minor changes the body will get an extension on the number, for instance, EFRA2004001 will be EFRA2004001A after the changes. After a second change it will be EFRA2004001B.

All changes must be submitted to the homologation officer and need to be accepted by EFRA and will be charged with 40% of the original homologation fee.

Different bodies with the same number are not possible.

After 5 years a body will disappear from the list unless the manufacturer asks for a license for another period of 5 years. The fee for an extra period is 40% of the normal homologation fee.

The following bodies can apply for a 5 years extension and they will receive a new number to be "engraved" in the shell;

Can-Am	Paris	VDS Can Am	RPVDS1
Can-Am	Parma	Audi R8	1221
Can-Am	HPI	Lola VDS	7580
Can-Am	Serpent	Lola VDS	1750
GT1	Frewer	Lola VDS	FR80
GT1	Serpent	McLaren GTR/GT1	1751

GT1	Serpent	Porsche 911 GT1	1753
GTP	Racers Choice	Lola VDS	09217
GTP	Serpent	Porsche 962 GTP	1745
LMP	Protoform	PF - 1LMP	1453
Can-Am	TRT/Serpent	Lola VDS	EFRA251
Can-Am	Mugen	Lola VDS	EFRA252
Group-C	Serpent/TRT	Porsche 962	EFRA311
Group-C	Azeta	Porsche 962	EFRA306
Group-C	RAME srl	Porsche 962	EFRA307
Group-C	Lack	Porsche 962c	EFRA308
Group-C	Enneti	Porsche 962c	EFRA309
Group-C	Azeta	Porsche 962c	EFRA310
Can-Am	Kyosho	VDS lola	
Can-Am	CMC	Elfin	
Can-Am	Frewer	VDS lola	
Can-Am	Frewer	Elfin	

All others and new bodies will have to go to the normal homologation procedure.

Bodies must be presented to the homologation officer latest end of February and will be published on a list on March 31st the latest.

12. 1:4

At the moment, all bodysHELLS can be used

13. 1:5 Touring Cars

No.	Type	Manufacturer	Country	Date	Category
5030/97 am	Honda Accord 2,0 '99	Bergonzoni	I	18.06.06	Class 2
5033/00 am	Honda Accord 2,0 '00	FG	D	14.03.06	Class 2
5035/00 am	Alfa Romeo 156 2.0 '99	PMT	I	18.03.06	Class 2
5038/02	Honda Accord 2,0 '00	PMT	I	05.05.02	Class 2
5039/03	BMW 320i ETCC 02 (E46)	Ferretti	I	03.03.03	Super 2000
5040/03	BMW 320i ETCC 03 (E46)	Killam	USA	08.05.03	Super 2000
5041/03	VOLVO S60 ETCC 03	PMT	I	18.05.03	Super 2000
5042/03	PEUGEOT 406 Coupé STCC 03	MD-Concept	F	16.11.03	FIA STC
5043/04	Alfa Romeo 156 2,0 ETCC	Bergonzoni	I	11.07.04	Super 2000
5044/04	SEAT Toledo Cupra 2.0 ETCC 04	Ferretti	I	31.07.04	Super 2000
5045/04	Honda Accord Euro R ETCC 04	Killam	USA	24.10.04	Super 2000
5046/05	Honda Accord 2,0 '02	DELTA Plastic	I	19.04.05	Class 2
5047/05	PEUGEOT 406 Coupé STCC 03	DELTA Plastic	I	19.04.05	FIA STC
5048/06	JAS Honda Accord ETCC 04	GENIUS	I	26.01.06	Super 2000
5049/06	JAS Honda Accord WTCC 05	Ferretti	I	14.03.06	Super 2000
5050/06	JAS Honda Accord ETCC 04	Vögele	D	10.04.06	Super 2000
5051/06	BMW 320si WTCC 06	Killam	USA	07.05.06	Super 2000
5052/06	BMW 320si WTCC 06	TRT-Technik	D	04.06.06	Super 2000
5053/06	Alfa Romeo 156 2,0 WTCC 06	FG	D	18.06.06	Super 2000
5054/06	Alfa Romeo 156 2,0 WTCC 06	Bergonzoni	I	18.06.06	Super 2000

Up-dated
14 January 2007

am = aerodynamic modifications available

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