



**EFRA ANNUAL GENERAL MEETING**  
**HOTEL Holiday Inn, Brussels**  
**Belgium**  
**6-7th of November 2010**

**AGENDA ELECTRIC SECTIONS – GENERAL. Sat. 6.11.10.**

**1. CHAIRMAN'S WELCOME Mr. Heiner Martin & Mr. Frank Mostrey**

The Electric Track Chairman opened the meeting at --

**2. APOLOGIES FOR ABSENCE – ELECTRIC GENERAL**

Apologies have been received from:

Member Countries presents. Section subscription.

COUNTRY	PRESENT	SECTION SUBSCR
AUSTRIA		
BELGIUM		
BULGARIA		
CROATIA		
CYPRUS		
CZECH REP.		
DENMARK		
ESTONIA		
FINLAND		
FRANCE		
GEORGIA		
GERMANY		
GREAT BRITAIN		
GREECE		
HOLLAND		
HUNGARY		
IRELAND		
ITALY		
LITHUANIA		
LUXEMBOURG		
MONACO		
NORWAY		
POLAND		
PORTUGAL		
ROMANIA		
RUSSIA		
SLOVAK REP.		
SLOVENIA		
SPAIN		
SWEDEN		
SWITZERLAND		
TURKEY		
<b>TOTAL</b>		

Other persons present:

### 3. MINUTES OF 2009 SECTION MEETING

31<sup>st</sup>. Of October and 1<sup>nd</sup>. of November 2009 – Brussels, Belgium

Matters arising from the minutes:

The minutes were checked and accepted as written at the AGM 2009.

The following person was elected to check the minutes of this year:

### 4. CORRESPONDENCE RECEIVED

### 5. RULE PROPOSALS (Does / May affect all Electric Sections)

**Note: The EFRA Committee has studied all received proposals and has come to an opinion over each one, The EFRA Section Chairman will inform the floor of such positions.**

#### APPENDIX 3 A ELECTRIC CARS GENERAL

##### THE RULE IS NEW:

1.3.

**Existing Rule:** Specific track requirements for 1/10 Off Road class tracks

**Proposal:** Add new rule 1.3.3  
If two Classes (2WD & 4WD) are to be held on the same track, then the track should be significantly different for the two Classes. Reverse operation is acceptable.

**Remarks:** It is normal to find that some competitors only enter the 'second' Class. If the track is not changed, they are at a disadvantage to those competitors that competed in the first Class.

Proposed by EFRA

**Seconded by:** ..... o Not  
Seconded

**The proposal:** o Passed Unanimously o Passed with .... for, .... against and .... abstentions.

o Rejected with .... for, .... against and .... abstentions. o  
Amended

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##### THE RULE SHOULD BE AMENDED TO READ:

2.4.

**Existing Rule:** 'SPEC' BRUSHLESS MOTORS (17.5T, 13.5T and 10.5T 'wind' limit)  
The following rules have been agreed by various International organisations.  
1 Only sensored motors are allowed in the Spec. classes.  
2 The motor has to be rebuildable. Ball bearings are allowed. The motor must be constructed to allow easy replacement of the; rotor, bearings and front End-Bell.  
3 Sensor connection requirements:  
The motor must use a six-position JST ZH connector model number ZHR-6 or equivalent connector with 6 JST 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, 10 k Thermistor referenced to ground potential  
Pin #6 - Red wire + 5.0 volts d.c. +/- 10%.  
Compatible speed control must use the 6 position JST header part number X-6B-ZR-SMX-TF (where the X denotes the style of the header), or equivalent.  
The motor power connectors have to be clearly marked A, B, C.  
A for phase A. B for phase B. C for phase C  
It is not mandatory that sensored Speed Controls have to be used, or that the sensor 'harness' has to be connected.  
4 The Can. (Based on '05' size specifications).  
The overall dimensions of the assembled motor do not include: - solder tabs, lead wires or the original manufacturer's logo or name.  
Overall maximum diameter is 36.02mm measured at whatever point yields the maximum dimension.  
Overall minimum diameter is 34.0 mm measured at whatever point yields the minimum dimension.  
Maximum length is 53.0 mm measured from the mounting face of the motor to the furthest point of the end bell. Minimum length is 50.0 mm measured from the mounting face of the motor to the furthest point of the end bell. Motor mounting holes must be on nominal 25.0/25.4 mm centres.  
5 The Stack/Stator: Slot-less stators are not allowed. The stator must be continuous laminations having the same overall shape, being one after the other without anything in between. The laminations must be of one homogeneous material without cut-outs, holes or hollow sections other than for the

three slots of copper coil wires and the three grooves for the screws used to hold the entire assembly together. Stator minimum length 19.3 mm, maximum 21.0 mm. The thickness of the stator laminations is 0.35 +/- 0.05 mm. The Inside diameter of the stator must accept a 'plug gauge' of 14.50 mm +/- 0.005 diameter, clearing the stator, plus its windings and the electrical collection ring at any end of the stator.

6 The Winding: Only three slot (phase) "Y" (star) wound stators are allowed. No delta wound stators allowed. Only circular (round) pure copper magnet wire permitted. The three slotted stator must be wound with: -

17.5T Class:- 17.5 turns of 2 x 20 awg. (or 0.813 mm) maximum wire dia.

13.5T Class: - 13.5 turns of 2 x 21 awg. (or 0.724 mm), & 2 x 23 awg. (or 0.574 mm) maximum wire dia.

10.5T Class: - 10.5 turns of 2 x 20 awg. (or 0.813 mm), & 2 x 22 awg. (or 0.643 mm) maximum wire dia. Dimensions are before lacquer coating

7 The Rotor: Shaft diameter must be 3.175mm where the pinion gear locates. Only one piece, two pole Neodymium bonded or sintered, or Ferrite (ceramic) magnetic rotors are permitted. Magnet length will be 25.00 +/- 1.00mm, not including any non-magnetic balancing aids. Magnet outside diameter will be 12.20/12.51mm (min./max. with no further tolerance) for the entire length of the magnet. The shaft outside diameter where the magnet is mounted will be 7.25mm +/- 0.15mm, with this diameter extending beyond the magnet to facilitate measurement.

8 All motors must have the original manufacturer's logo or name moulded/engraved into the end bell/plate. A unique marking or feature that is difficult to remove must be incorporated into the assembled motor to identify the motor is either a 17.5T, 13.5T or 10.5T Spec. Class motor.

**Proposal:**

Add to (8) last para. :-

Motors introduced from 2011 onwards must have the 'wind' # etched/engraved onto the outer surface of the motor on a part of the motor that cannot easily be separated from the stator windings.

**Remarks:**

Makes it easier for Tech. Inspection.

Some motors use colour coding, but various manufacturers use different colours for the different winds which can be confusing.

**Proposed by EFRA**

**Seconded by: ..... o Not  
Seconded**

**The proposal: o Passed Unanimously o Passed with .... for, .... against and ....  
abstentions.**

**o Rejected with .... for, .... against and .... abstentions. o  
Amended**

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**THE RULE SHOULD BE AMENDED TO READ:**

3.1.2.

**Existing Rule:**

Lithium Based (LiPo/LiFe) Batteries can be approved, but must conform to the following :-

1. Lithium Based (LiPo/LiFe) battery packs must have a hard, protective case that completely envelopes the cell(s). The case should be made from ABS or a similar material. The two halves of the case must be factory sealed in a way that any attempt to open the case will destroy the case. The only opening in the case that is allowed, is for the exit of wires.:

The maximum case sizes are as follows:

2S Batteries:

Length: 139.0 mm.

Width: 47.0 mm. (The max. width includes any side exit wires).

Height: 25.10 mm. ( Chassis location features additional to this dimension are allowed)

Saddle-Pack cells are allowed, but must comply with the above dimensions.

Saddle-Pack cells must have a combined dimension of 139.0mm max when placed end to end.

1S Batteries:

Length: 93.0mm.

Width: 47.0mm. (Side exit wires are allowed outside this dimension).

Height: 18.5mm. ( Chassis location features additional to this dimension are allowed)

2. Individual cells used in the construction of the battery pack shall be rated at (LiPo 3.7/LiFe 3,3) volts nominal. Individual cells may be wired in parallel.

For 2S Packs, the maximum connection "In Series" is two, to give a Final pack voltage of (LiPo 7.4v/LiFe 6.6v) nominal.

For 1S Packs, cells can only be connected in parallel to give a Final pack voltage of (LiPo 3.7v/LiFe 3.3v) nominal.

3. The battery pack shall have leads extending from the case for the positive and negative electrical connections using wire of adequate size to handle discharge rates acceptable to racing applications. Alternatively, the case shall have internal connection points for these wires clearly marked positive and negative so the user can apply the lead wires. Any type of metal connections that are incorporated in the battery pack must be substantially below the major surface of the plastic casing, to prevent any "short circuit" if placed on a conductive surface.

4. The case must have the original suppliers label intact, stating the rated voltage and the chemistry (Lipo/LiFe).. The Brand name/logo shall be easily readable.

5. All LiPo/LiFe packs must be charged with a LiPo/LiFe-capable charger using the industry standard CC/CV (Constant Current/Constant Voltage) charge profile.

6. 2S LiPo/LiFe batteries may be charged to a maximum of 8.40v (LiPo) resp. 7.40v (LiFe). 1S LiPo/LiFe batteries may be charged to a maximum of 4.20v (LiPo) resp. 3.70v (LiFe). Overcharging is a serious safety hazard and will not be tolerated.

7. Any competitor found to be charging cells using a charger that is not specifically designed for LiPo/LiFe cells, or using a charge profile other than the industry standard CC/CV, will be penalised at the event.

Any competitor found to have charged LiPo/LiFe cells to above the values detailed in rule 3.1.2 (6) above will be penalised. The different guidelines for use and homologation of LiPo/LiFe-Batteries are published on the EFRA webpage ([www.EFRA.ws](http://www.EFRA.ws)). A copy of the guidelines for the end-user must be included in the driver's packages for EC's.

**Proposal:**

2S Batteries:

Length: 139.0 mm.

Width: 47.0 mm. (The max. width includes any side exit wires).

Height: 25.10 mm. ( Chassis location features additional to this dimension are allowed)

Maximum Weight: 320 grams

Saddle-Pack cells are allowed, but must comply with the above dimensions.

Saddle-Pack cells must have a combined dimension of 139.0mm max when placed end to end.

Saddle-Pack cells must have a combined weight of 320 grams max.

**Remarks:**

Using brushless and LiPo technology has increased speed and power of the cars dramatically, putting lots of stress on the material, eg the tires which are bursting due to the high rotational speed. To limit power and speed while not stopping the positive technical development, a capacity limitation on the batteries should be established. Along with the increase in run time (see proposal for 9.4.1) this will prevent drivers from using huge battery capacities to keep today's power and speed over 7 minutes of running time. The weight limit of 320grams accommodates all batteries on the EFRA homologation lists, so no existing product has to be banned, still this limit will prevent or at least slow down the introduction of batteries with higher capacities.

**Proposed by SRCCA**

**Seconded by: .....**  **Not Seconded**

**The proposal:  Passed Unanimously  Passed with .... for, .... against and .... abstentions.**

**Rejected with .... for, .... against and .... abstentions.  Amended**

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**THE RULE IS NEW:**

3.1.2.

**Existing Rule:**

Lithium Based (LiPo/LiFe) Batteries can be approved, but must conform to the following :-  
1. Lithium Based (LiPo/LiFe) battery packs must have a hard, protective case that completely envelopes the cell(s). The case should be made from ABS or a similar material. The two halves of the case must be factory sealed in a way that any attempt to open the case will destroy the case. The only opening in the case that is allowed, is for the exit of wires.:

The maximum case sizes are as follows:

2S Batteries:

Length: 139.0 mm.

Width: 47.0 mm. (The max. width includes any side exit wires).

Height: 25.10 mm. ( Chassis location features additional to this dimension are allowed)

Saddle-Pack cells are allowed, but must comply with the above dimensions.

Saddle-Pack cells must have a combined dimension of 139.0mm max when placed end to end.

1S Batteries:

Length: 93.0mm.

Width: 47.0mm. (Side exit wires are allowed outside this dimension).

Height: 18.5mm. ( Chassis location features additional to this dimension are allowed)

2. Individual cells used in the construction of the battery pack shall be rated at (LiPo 3.7/LiFe 3,3) volts nominal. Individual cells may be wired in parallel.

For 2S Packs, the maximum connection "In Series" is two, to give a Final pack voltage of (LiPo 7.4v/LiFe 6.6v) nominal.

For 1S Packs, cells can only be connected in parallel to give a Final pack voltage of (LiPo 3.7v/LiFe 3.3v) nominal.

3. The battery pack shall have leads extending from the case for the positive and negative electrical connections using wire of adequate size to handle discharge rates acceptable to racing applications. Alternatively, the case shall have internal connection points for these wires clearly marked positive and negative so the user can apply the lead wires. Any type of metal connections that are

incorporated in the battery pack must be substantially below the major surface of the plastic casing, to prevent any "short circuit" if placed on a conductive surface.

4. The case must have the original suppliers label intact, stating the rated voltage and the chemistry (LiPo/LiFe).. The Brand name/logo shall be easily readable.

5. All LiPo/LiFe packs must be charged with a LiPo/LiFe-capable charger using the industry standard CC/CV (Constant Current/Constant Voltage) charge profile.

6. 2S LiPo/LiFe batteries may be charged to a maximum of 8.40v (LiPo) resp. 7.40v (LiFe). 1S LiPo/LiFe batteries may be charged to a maximum of 4.20v (LiPo) resp. 3.70v (LiFe). Overcharging is a serious safety hazard and will not be tolerated.

7. Any competitor found to be charging cells using a charger that is not specifically designed for LiPo/LiFe cells, or using a charge profile other than the industry standard CC/CV, will be penalised at the event.

Any competitor found to have charged LiPo/LiFe cells to above the values detailed in rule 3.1.2 (6) above will be penalised. The different guidelines for use and homologation of LiPo/LiFe-Batteries are published on the EFRA webpage ([www.EFRA.ws](http://www.EFRA.ws)). A copy of the guidelines for the end-user must be included in the driver's packages for EC's.

**Proposal:** 8. LiPo/LiFe drive batteries should be charge in a 'Lipo sack' at all times.  
LiPo sack is defined as a receptacle designed for the purpose of charging LiPo/LiFe batteries and of a suitable construction as to contain a LiPo/LiFe fire.

**Remarks:** Safety - we have seen incidents recently where LiPo fires have occurred. We need to make all efforts to minimise the risk if this happens.

**Proposed by BRCA**

**Seconded by:** .....  **Not Seconded**

**The proposal:**  **Passed Unanimously**  **Passed with .... for, .... against and .... abstentions.**

**Rejected with .... for, .... against and .... abstentions.**  **Amended**

**THE RULE SHOULD BE AMENDED TO READ:**

3.1.2.

**Existing Rule:** Lithium Based (LiPo/LiFe) Batteries can be approved, but must conform to the following :-

- Lithium Based (LiPo/LiFe) battery packs must have a hard, protective case that completely envelopes the cell(s). The case should be made from ABS or a similar material. The two halves of the case must be factory sealed in a way that any attempt to open the case will destroy the case. The only opening in the case that is allowed, is for the exit of wires.:  
The maximum case sizes are as follows:  
2S Batteries:  
Length: 139.0 mm.  
Width: 47.0 mm. (The max. width includes any side exit wires).  
Height: 25.10 mm. ( Chassis location features additional to this dimension are allowed)  
Saddle-Pack cells are allowed, but must comply with the above dimensions.  
Saddle-Pack cells must have a combined dimension of 139.0mm max when placed end to end.
- 1S Batteries:  
Length: 93.0mm.  
Width: 47.0mm. (Side exit wires are allowed outside this dimension).  
Height: 18.5mm. ( Chassis location features additional to this dimension are allowed)
- Individual cells used in the construction of the battery pack shall be rated at (LiPo 3.7/LiFe 3,3) volts nominal. Individual cells may be wired in parallel.  
For 2S Packs, the maximum connection "In Series" is two, to give a Final pack voltage of (LiPo 7.4v/LiFe 6.6v) nominal.  
For 1S Packs, cells can only be connected in parallel to give a Final pack voltage of (LiPo 3.7v/LiFe 3.3v) nominal.
- The battery pack shall have leads extending from the case for the positive and negative electrical connections using wire of adequate size to handle discharge rates acceptable to racing applications. Alternatively, the case shall have internal connection points for these wires clearly marked positive and negative so the user can apply the lead wires. Any type of metal connections that are incorporated in the battery pack must be substantially below the major surface of the plastic casing, to prevent any "short circuit" if placed on a conductive surface.
- The case must have the original suppliers label intact, stating the rated voltage and the chemistry (Lipo/LiFe).. The Brand name/logo shall be easily readable.
- All LiPo/LiFe packs must be charged with a LiPo/LiFe-capable charger using the industry standard CC/CV (Constant Current/Constant Voltage) charge profile.
- 2S LiPo/LiFe batteries may be charged to a maximum of 8.40v (LiPo) resp. 7.40v (LiFe). 1S LiPo/LiFe batteries may be charged to a maximum of 4.20v (LiPo) resp. 3.70v (LiFe). Overcharging is a serious safety hazard and will not be tolerated.
- Any competitor found to be charging cells using a charger that is not specifically designed for LiPo/LiFe cells, or using a charge profile other than the industry standard CC/CV, will be penalised at the event.

Any competitor found to have charged LiPo/LiFe cells to above the values detailed in rule 3.1.2 (6) above will be penalised. The different guidelines for use and homologation of LiPo/LiFe-Batteries are published on the EFRA webpage ([www.EFRA.ws](http://www.EFRA.ws)). A copy of the guidelines for the end-user must be included in the driver's packages for EC's.

**Proposal:** Amend 3.1.2 (4) to read :-  
4. The case must have the original suppliers label intact, stating:- the Part #, the rated voltage and the chemistry (LiPo/LiFe). The Brand name/logo shall be easily readable.

**Remarks:** Part #'s are essential, as there are so many batteries that look similar.

**Proposed by EFRA**

**Seconded by:** ..... o Not  
Seconded

**The proposal:** o Passed Unanimously o Passed with .... for, .... against and .... abstentions.

o Rejected with .... for, .... against and .... abstentions. o  
Amended

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**THE RULE SHOULD BE AMENDED TO READ:**

3.1.2.

**Existing Rule:** Lithium Based (LiPo/LiFe) Batteries can be approved, but must conform to the following :-

1. Lithium Based (LiPo/LiFe) battery packs must have a hard, protective case that completely envelopes the cell(s). The case should be made from ABS or a similar material. The two halves of the case must be factory sealed in a way that any attempt to open the case will destroy the case. The only opening in the case that is allowed, is for the exit of wires.:  
The maximum case sizes are as follows:  
2S Batteries:  
Length: 139.0 mm.  
Width: 47.0 mm. (The max. width includes any side exit wires).  
Height: 25.10 mm. ( Chassis location features additional to this dimension are allowed)  
Saddle-Pack cells are allowed, but must comply with the above dimensions.  
Saddle-Pack cells must have a combined dimension of 139.0mm max when placed end to end.  
1S Batteries:  
Length: 93.0mm.  
Width: 47.0mm. (Side exit wires are allowed outside this dimension).  
Height: 18.5mm. ( Chassis location features additional to this dimension are allowed)
2. Individual cells used in the construction of the battery pack shall be rated at (LiPo 3.7/LiFe 3,3) volts nominal. Individual cells may be wired in parallel.  
For 2S Packs, the maximum connection "In Series" is two, to give a Final pack voltage of (LiPo 7.4v/LiFe 6.6v) nominal.  
For 1S Packs, cells can only be connected in parallel to give a Final pack voltage of (LiPo 3.7v/LiFe 3.3v) nominal.
3. The battery pack shall have leads extending from the case for the positive and negative electrical connections using wire of adequate size to handle discharge rates acceptable to racing applications. Alternatively, the case shall have internal connection points for these wires clearly marked positive and negative so the user can apply the lead wires. Any type of metal connections that are incorporated in the battery pack must be substantially below the major surface of the plastic casing, to prevent any "short circuit" if placed on a conductive surface.
4. The case must have the original suppliers label intact, stating the rated voltage and the chemistry (LiPo/LiFe).. The Brand name/logo shall be easily readable.
5. All LiPo/LiFe packs must be charged with a LiPo/LiFe-capable charger using the industry standard CC/CV (Constant Current/Constant Voltage) charge profile.
6. 2S LiPo/LiFe batteries may be charged to a maximum of 8.40v (LiPo) resp. 7.40v (LiFe). 1S LiPo/LiFe batteries may be charged to a maximum of 4.20v (LiPo) resp. 3.70v (LiFe). Overcharging is a serious safety hazard and will not be tolerated.
7. Any competitor found to be charging cells using a charger that is not specifically designed for LiPo/LiFe cells, or using a charge profile other than the industry standard CC/CV, will be penalised at the event.  
Any competitor found to have charged LiPo/LiFe cells to above the values detailed in rule 3.1.2 (6) above will be penalised. The different guidelines for use and homologation of LiPo/LiFe-Batteries are published on the EFRA webpage ([www.EFRA.ws](http://www.EFRA.ws)). A copy of the guidelines for the end-user must be included in the driver's packages for EC's.

**Proposal:** Add to first para:-

Lithium Based (LiPo/LiFe) Batteries can be approved, but must conform to the following :-

1. Lithium Based (LiPo/LiFe) battery packs must have a hard, protective case that completely envelopes the cell(s). The case should be made from ABS or a similar material. The two halves of the case must be factory sealed in a way that any attempt to open the case will destroy the case. The only opening in the case that is allowed, is for the exit of wires. Batteries to comply with the weights specified on the EFRA homologation list, (maximum tolerance for manufacturers is +/- 4%).

**Remarks:** It is possible for manufacturers to fit different cells (in the battery case) to those contained in the samples approved. As the battery cases cannot be opened, controlling the weight will help to offset this possibility.

**Proposed by EFRA**

**Seconded by:** ..... o Not  
Seconded

The proposal:  Passed Unanimously  Passed with .... for, .... against and .... abstentions.

Rejected with .... for, .... against and .... abstentions.  Amended

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**THE RULE SHOULD BE AMENDED TO READ:**

3.2.2.

**Existing Rule:**

Lithium based batteries: For 2010 approval: -  
2S Batteries -- A minimum of one individual battery has to be received by 31st. Dec. 2009.  
1S Batteries -- A minimum of one individual battery has to be received by 31st. DEC. For subsequent years, the submission date for 2S and 1S battery samples will be 1st Dec.  
Each individual battery must have safety test certification in accordance with UN Tests, detailed in Part 3, Sub-Section 38.3 of the UN Manual of Tests and Criteria.  
Subject to the Chairman being satisfied that the new cell conforms with technical specifications and commercial availability, the cell will be legal for use from the following April 1st. Cells received after the above submission dates will not be included on the EFRA approved list for the following year. Any changes to the technical specifications or visual appearance of the battery or casing after the original approval will require re-approval.

**Proposal:**

Lithium based batteries:  
2S Batteries -- A minimum of one individual battery has to be received by 1st. Dec.  
1S Batteries -- A minimum of one individual battery has to be received by 1st. Dec.  
Each individual battery sample must be supplied with :-  
(a) Safety test certification in accordance with UN Tests, detailed in Part 3, Sub-Section 38.3 of the UN Manual of Tests and Criteria.  
(b) Technical Spec. sheet detailing the recommended charging rate, the maximum voltage when charging, case material, thickness and method of sealing the case, the battery weight (max tolerance +/- 4%).  
Subject to the Chairman being satisfied that the new cell conforms with technical specifications and commercial availability, the cell will be legal for use from the following April 1st. Cells received after the above submission dates will not be included on the EFRA approved list for the following year. Any changes to the technical specifications or visual appearance of the battery or casing after the original approval will require re-approval.

**Remarks:**

Lithium batteries are inherently dangerous if misused.  
Manufacturers data is needed to ensure we know what is acceptable for each battery.  
Battery weights are needed to evaluate if the manufacture of the internal cells have been changed.  
  
Submission dates simplified (but not altered) from 2010 text.

**Proposed by EFRA**

**Seconded by: .....**  Not  
Seconded

The proposal:  Passed Unanimously  Passed with .... for, .... against and .... abstentions.

Rejected with .... for, .... against and .... abstentions.  Amended

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**THE RULE IS NEW:**

4.

**Existing Rule:**

**ELECTRONIC DRIVING AIDS**

**Proposal:**

'Spec' electronic speed controls: timing advance in electronic speed controls eligible for 'spec' class racing is not allowed. Furthermore no advanced motor control functions (i.e. Boost, Cheat Mode, Turbo, SuperCharge, etc). are allowed for 'spec' class racing ESC.

**Remarks:**

although EFRA is not holding any spec class touring car races under these rules, the problem which most national federations are facing with their national or regional spec racing classes are the increased speed and performance of the spec classes compared to modified when using the latest spec racing ESCs. With the advanced timing functions as well as the advanced motor control functions such as 'Boost', no clear speed and performance limitation for spec classes is possible, the natural gap between spec class and modified is closing very fast and it is almost impossible for the national federations to find rules which are fitting to the respective spec class and are able to provide the gaps in performance between the classes. The proposal is to ban ESCs with such spec racing software from spec class racing at all, allowing the performance limitations for spec classes usually defined by motor winds to be effective again.  
In addition, racers have to invest a lot of money in new ESCs and new Software to keep up with the development. Without the latest software or ESC version, chances are high not to be competitive at the next race.  
If the development goes on at the actual pace, national federations will start to limit the usage of ESC in the spec categories to single brands or makes, converting the championships to brand trophy racing series, something the industry for sure can't be interested in.  
Industry/EFRA partners to come up with a proposal for the technical specification of such spec racing ESCs with no advanced timing and motor control functions.

**Proposed by SRCCA**

**Seconded by:** .....  Not  
Seconded

**The proposal:**  Passed Unanimously  Passed with .... for, .... against and ....  
abstentions.

Rejected with .... for, .... against and .... abstentions.   
Amended

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**THE RULE SHOULD BE AMENDED TO READ:**

7.2.6.

**Existing Rule:** 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. nuary.

**Proposal:** Add :-  
c) The reigning European Champion will automatically be allocated a place in the following European Championship.

**Remarks:** There is reference to the above addition in General Rules (3.6.7), but as (a) & (b) details the procedures for EC Champions at WC events and WC Champions at EC events, it seems sensible to include the situation for EC Champions at EC events.

**Proposed by EFRA**

**Seconded by:** .....  Not  
Seconded

**The proposal:**  Passed Unanimously  Passed with .... for, .... against and ....  
abstentions.

Rejected with .... for, .... against and .... abstentions.   
Amended

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**THE RULE SHOULD BE AMENDED TO READ:**

8.1.3.

**Existing Rule:** 1/10 E off-road EUROPEAN CHAMPIONSHIP:  
MONDAY: Free practice 2WD, Registration and Technical Inspection  
TUESDAY: Controlled Practice and Qualifying Rounds 1-3  
WEDNESDAY: Schedule permitting, one hour of unofficial practice in Heat Order of Round 4  
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: Schedule permitting, one hour of unofficial practice in Heat Order of Round 4.  
Qualifying Rounds 4-5, Finals and Prize Ceremony  
The Race Organiser can change the above timetable providing he does so well in advance. ALL changes to the Schedule or alterations to times of any Heats/Finals must be clearly identified to all Team managers and Officials in written form, at least one hour before such changes take place, if any procedures are being brought forward.

**Proposal:** 1/10 E off-road EUROPEAN CHAMPIONSHIP:  
MONDAY: Free practice 2WD, Registration and Technical Inspection  
TUESDAY: Controlled Practice and Qualifying Rounds 1-3  
WEDNESDAY: Schedule permitting, one hour of unofficial practice in Heat Order of Round 4  
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: Schedule permitting, one hour of unofficial practice in Heat Order of Round 4. Qualifying Rounds 4-5, Finals and Prize Ceremony  
SUNDAY: Reserve day for the 4WD finals in case earlier days are delayed because of rain. Last final must end 12:00 at latest.  
The Race Organiser can change the above timetable providing he does so well in advance. ALL changes to the Schedule or alterations to times of any Heats/Finals must be clearly identified to all Team managers and Officials in written form, at least one hour before such changes take place, if any procedures are being brought forward.

**Remarks:** Adding Sunday morning as reserve day gives more options for race control to find the best possible solution in case race has been delayed earlier in the week.

**Proposed by AKK**

**Seconded by:** .....  Not  
Seconded



The proposal:  Passed Unanimously  Passed with .... for, .... against and .... abstentions.

Rejected with .... for, .... against and .... abstentions.  Amended

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**THE RULE SHOULD BE AMENDED TO READ:**

9.4.1.

**Existing Rule:** 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.

**Proposal:** All qualifying Heats and Finals 1/10th will be 7 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.

**Remarks:** With change to Brushless and LiPo Batteries, speed and general performance of the touring cars have increased dramatically, to an extend, where e.g. wheels are bursting due to the rotational speed. One way to limit speed and power of the cars is to extend running time. While the actual LiPo batteries deliver more than enough run time for 5 minutes, increasing the run times to 7 minutes will lead to the usage of slower motors and shorter gear ratios which will limit to certain extend speed and power of the cars. Of course, this makes only sense if the capacity of the LiPo Batteries is capped at a certain level. As long as the LiPo capacity is left open, car power and performance will steadily increase. (pls see also proposal for chapter 3.1.2 for battery capacity limitation)

**Proposed by SRCCA**

**Seconded by:** .....  Not  
Seconded

The proposal:  Passed Unanimously  Passed with .... for, .... against and .... abstentions.

Rejected with .... for, .... against and .... abstentions.  Amended

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**THE RULE SHOULD BE AMENDED TO READ:**

9.4.7.

**Existing Rule:** 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 single fastest time of drivers in their heat. This will apply whether the Fastest Time Qualifying System or Round by Round System is used.

**Proposal:** During the first round of qualifying, heat-starting order can be determined 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 single fastest time of drivers in their heat. This will apply whether the Fastest Time Qualifying System or Round by Round System is used.

**Remarks:** no lottery please, racing a championship is all about racing so use the consecutive lap method.

**Proposed by NOMAC**

**Seconded by:** .....  Not  
Seconded

The proposal:  Passed Unanimously  Passed with .... for, .... against and .... abstentions.

Rejected with .... for, .... against and .... abstentions.  Amended

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**THE RULE SHOULD BE AMENDED TO READ:**

11.1.

**Existing Rule:** 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.

**Proposal:** As agreed agm 2009.

11.1 All cars may be called for technical inspection at any time but must always be presented for scrutinizing. (11.4 remains in force).

**Remarks:** The above amendment was agreed at the 2009 agm, but the 2010 Handbook was not updated. Therefore it should be included.

**Proposed by EFRA**

**Seconded by:** .....  Not  
Seconded

The proposal:  Passed Unanimously  Passed with .... for, .... against and .... abstentions.

Rejected with .... for, .... against and .... abstentions.  Amended

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**THE RULE SHOULD BE AMENDED TO READ:**

11.6.1.

**Existing Rule:** A second chassis, prepared for wet weather racing may be submitted for technical inspection. This chassis may only be used when the race director has called either the heat or final as being a 'wet race'.

**Proposal:** Add:  
1/10 Off-Road complies with General Rule 8.7.4, therefore the above does not apply to this section.

**Remarks:** Clarifies the amendment made to this rule in 2009.

**Proposed by EFRA**

**Seconded by:** .....  Not  
Seconded

The proposal:  Passed Unanimously  Passed with .... for, .... against and .... abstentions.

Rejected with .... for, .... against and .... abstentions.  Amended

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**THE RULE SHOULD BE AMENDED TO READ:**

12.4.

**Existing Rule:** All cars shall have identifying numbers in at least three positions, right, left and on front of the car.

**Proposal:** All cars shall have identifying numbers in at least three positions, right, left and on front of the car.

The numbers must be put on the body shell so the numbers are easy seen by the referee or race director.

**Remarks:** A lot of body shells have small edges and when nrs are put over these they are hard or impossible to read. Also a people like to put the nrs on shells in an angle so for instance a 1 look like a 7. With the current speed of the electric cars it is already hard enough.

**Proposed by NOMAC**

**Seconded by:** .....  Not  
Seconded

The proposal:  Passed Unanimously  Passed with .... for, .... against and .... abstentions.

Rejected with .... for, .... against and .... abstentions.  Amended

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**MEETING TO CONTINUE WITH ELECTRIC OFF-ROAD SECTION MEETING.**



**EFRA ANNUAL GENERAL MEETING**  
HOTEL Holiday Inn, Brussels  
6-7th of November 2010

**AGENDA ELECTRIC - OFF-ROAD.**

Sat. 6.11.10

**1. CHAIRMAN'S WELCOME**

Mr. Frank Mostrey

The Electric Off-road Chairman opened the meeting at

**2. APOLOGIES FOR ABSENCE**

Apologies have been received from:

COUNTRY	PRESENT	SECTION SUBSCR	REQUESTED:				Max33%
			EC Buggy 2wd	EC Buggy 4wd	WC Buggy 2wd	WC Buggy 4wd	%
AUSTRIA							
BELGIUM							
BULGARIA							
CROATIA							
CYPRUS							
CZECH REP.							
DENMARK							
ESTONIA							
FINLAND							
FRANCE							
GEORGIA							
GERMANY							
GREAT BRITAIN							
GREECE							
HOLLAND							
HUNGARY							
IRELAND							
ITALY							
LITHUANIA							
LUXEMBOURG							
MONACO							
NORWAY							
POLAND							
PORTUGAL							
ROMANIA							
RUSSIA							
SLOVAK REP.							
SLOVENIA							
SPAIN							
SWEDEN							
SWITZERLAND							
TURKEY							
		<b>TOTALS</b>					
			2wd		4wd		

Other persons present:

### 3. MINUTES OF 2009 SECTION MEETING

31<sup>st</sup>. Of October and 1<sup>nd</sup>. of November 2009 – Brussels, Belgium: Matters arising from the minutes:

The minutes were accepted as written at the AGM 2009.

The following person was elected to check the minutes of this year:

### 4. CORRESPONDENCE RECEIVED

### 5. CHAIRMAN'S REPORT

### 6. PRESENTATIONS FOR APPLICATIONS EC 2012 AND GP'S 2011

The section has reviewed the applications to host coming EFRA events:

#### Proposals 2010-2011

Year/Date	Alt. Date	Status	Country	Venue
2011 May	2012 May	GP	Austria	WMW RC-BUGGY-RACING CENTER FEHRING Fabrikstraße 8350 Fehring
17 <sup>th</sup> – 19 <sup>th</sup> of June 2011		GP	Norway	Radøy RC track, located about 40 minutes drive north of Bergen, Norway
July 2011		EC	Norway	Radøy RC track, located about 40 minutes drive north of Bergen, Norway
2011 August	2012 August	EC	Austria	WMW RC-BUGGY-RACING CENTER FEHRING Fabrikstraße 8350 Fehring
August 22 to 27		EC	France	Plaine des Sports du Hameau Rue des Corps Franc-Pommies 64000 PAU
<b>2012</b>				
6-11 August 2012	20-25 August 2012	EC	Belgium	BRCC Black country Arena Complexe de la Garenne Rue de chemin vert Lodelinsart Belgium

#### Final Race calendar 2011

Year/Date	Alt. Date	Status	Country	Venue
16-23 July 2011	August	WC	FINLAND	VAASA

#### Future Race calendar Championships

Year/Date	Alt. Date	Status	Country	Venue

Nominated Tyres for the 1/10<sup>th</sup> Off-Road EC 2011

EC 2012

Allocations were made to each country as printed in the table form under item 2 on the agenda

## 7. RULE PROPOSALS

**Note: The EFRA Committee has studied all received proposals and has come to an opinion over each one, The EFRA Section Chairman will inform the floor of such positions.**

### APPENDIX 3 C ELECTRIC CARS PARTICULARS for 1/10 OFF ROAD

#### THE RULE SHOULD BE AMENDED TO READ:

3.4.

**Existing Rule:** 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.

**Proposal:** Amend to read :-

Modifications to tyre tread patterns and 'location beads' are allowed by trimming or removal, but the addition of any material is prohibited excepting the glue used to retain the tyre to the wheel. '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.

**Remarks:** At a recent EC, drivers asked if they could glue an additional band from another tyre. This is not really acceptable, and the current rule does not cover this situation.

**Proposed by EFRA**

**Seconded by: .....**  **Not Seconded**

**The proposal:  Passed Unanimously  Passed with .... for, .... against and .... abstentions.**

**Rejected with .... for, .... against and .... abstentions.  Amended**

#### THE RULE SHOULD BE AMENDED TO READ:

4.1.

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

**Proposal:** The Race Director and the Referees are jointly responsible for the decision to stop racing in the event of adverse weather conditions. If in doubt or they do not agree they can consult the EFRA rep. or his deputy ( if at the meeting ) for advice.

**Remarks:**

**Proposed by NOMAC**

**Seconded by: .....**  **Not Seconded**

**The proposal:  Passed Unanimously  Passed with .... for, .... against and .... abstentions.**

**Rejected with .... for, .... against and .... abstentions.  Amended**

#### THE RULE SHOULD BE AMENDED TO READ:

4.2.

**Existing Rule:** 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.

**Proposal:** 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. If the serie of heats / round cannot be completed the same day that particular round will be cancelled and next day will start with a new (complete) round.



Proposed by EFRA

Seconded by: ..... o Not  
Seconded

The proposal: o Passed Unanimously o Passed with .... for, .... against and ....  
abstentions.

o Rejected with .... for, .... against and .... abstentions. o  
Amended

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## **8. ELECTION OF SECTION VICE-CHAIRMAN.**

Paul Worsley Great Britain is willing to take the position of Chairman.

Frank Mostrey Belgium is willing to take the position of Vice Chairman

## **9. ANY OTHER BUSINESS**

## **10. ITEMS FOR GENERAL DISCUSSION.**

The Section Chairman thanks all participants for a constructive meeting, and being no further business the meeting was closed at

**MEETING TO CONTINUE WITH ELECTRIC TRACK SECTION MEETING.**



**EFRA ANNUAL GENERAL MEETING**  
**HOTEL Holiday Inn, Brussels**  
**Belgium**  
**6-7th of November 2010**

**AGENDA ELECTRIC - TRACK. Sat. 6.11.10**

**1. CHAIRMAN'S WELCOME Mr Heiner Martin**

The Electric Track Chairman opened the meeting at

**2. APOLOGIES FOR ABSENCE**

Apologies have been received from:

Member Countries presents, section subscription, allocations etc:

COUNTRY	PRESENT	SECTION SUBSCR	EC 1/12	EC 1/12 Spec	EC Touring	EC TC Indoor		
AUSTRIA								
BELGIUM								
BULGARIA								
CROATIA								
CYPRUS								
CZECH REP.								
DENMARK								
ESTONIA								
FINLAND								
FRANCE								
GEORGIA								
GERMANY								
GREAT BRITAIN								
GREECE								
HOLLAND								
HUNGARY								
IRELAND								
ITALY								
LITHUANIA								
LUXEMBOURG								
MONACO								
NORWAY								
POLAND								
PORTUGAL								
ROMANIA								
RUSSIA								
SLOVAK REP.								
SLOVENIA								
SPAIN								
SWEDEN								
SWITZERLAND								
TURKEY								



<b>TOTAL</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
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Other persons present:

### 3. MINUTES OF 2009 SECTION MEETING

31<sup>st</sup>. Of October and 1<sup>nd</sup>. of November 2009 – Brussels, Belgium

Matters arising from the minutes:

The minutes were checked and accepted as written at the AGM 2009.

The following person was elected to check the minutes of this year:

### 4. CORRESPONDENCE RECEIVED

### 5. CHAIRMAN'S REPORT

### 6. PRESENTATIONS FOR APPLICATIONS - EC AND GP'S 2011/2012

The section has received the following applications to host coming EFRA events. These proposals have reached us in time, no other proposal will be accepted after distribution of the agenda.

Tyres for the 1/10<sup>th</sup> Touring Car EC 2011:

Year/Date	Alt. Date	Status		Country	Venue
24 <sup>th</sup> to 27 <sup>th</sup> February 2011		EC TC Indoor	1/10 Touring Electric	Czech Republic	Prague
3th to the 6 <sup>th</sup> of march 2011		EC	1/12 <sup>th</sup> electric modified and stock	France	Gymnasium 13 rue Edouard Martel 42600 Montbrison France
2011 May		GP or Warm- Up	1/10 Touring Electric	Austria	RMC–Wien / MAC-Traiskirchen Badgasse / Hochmühlstraße 2514 Traiskirchen Austria
July 2011 2012 ???	August 2011	EC	1/10 Touring Electric	Spain	Club ARCA, Alcobendas (Madrid)
2011 August	2011 July	EC	1/10 Touring Electric	Austria	RMC–Wien / MAC-Traiskirchen Badgasse / Hochmühlstraße 2514 Traiskirchen Austria
<b>2012</b>					
2012 May		Warm- Up IFMAR	1/10 Touring Electric	Austria	RMC–Wien / MAC-Traiskirchen Badgasse / Hochmühlstraße 2514 Traiskirchen Austria
June 2012	July 2012	WC IFMAR	1:10 and 1:12 Electro track onroad	Netherlands	Cruquiusweg 43 2102 LS Heemstede Nederland
2012 August	2012 July	WC IFMAR	1/10 Touring Electric 1/12	Austria	RMC–Wien / MAC-Traiskirchen Badgasse / Hochmühlstraße 2514 Traiskirchen Austria
August 2012		EC	1/10 Electric Track	Great Britain	Cotswold Model Car Club Kemble Nr Cirencester Gloucestershire
2012		WC	Electric Track 1/10	Switzerland	Lostallo - Switzerland

		IFMAR			

### Final Race calendar 2010

Year/Date	Alt. Date	Status	Country	Venue

### Future Race calendar Championships

Year/Date	Alt. Date	Status	Country	Venue

Nominated Tyres for the 1/10<sup>th</sup>.

EC Touring Cars Indoor Prague

EC Touring Cars Vienna

Allocations were made to each country as printed in the table form under item 2 on the agenda

## 7. ALLOCATIONS

The Section Chairman propose to the meeting the following allocations (rule 3.6.4, page 58 of the EFRA Handbook)

## 8. RULE PROPOSALS

**Note: The EFRA Committee has studied all received proposals and has come to an opinion over each one, The EFRA Section Chairman will inform the floor of such positions.**

### APPENDIX 3 B ELECTRIC CARS REQUIREMENTS FOR ELECTRIC ON ROAD CLASSES

#### THE RULE SHOULD BE AMENDED TO READ:

1.1.

**Existing Rule:** 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.

**Proposal:** On carpet tracks a minimum ground clearance of 3mm (excluding spur gear) for 1/12 and 5mm for 1/10 is mandatory at the start of each heat and final.

**Remarks:**

**Proposed by AKK**

**Seconded by:** ..... o Not  
Seconded

**The proposal:** o Passed Unanimously o Passed with .... for, .... against and ....  
abstentions.

o Rejected with .... for, .... against and .... abstentions. o  
Amended

6.3.4.

**Existing Rule:** Each tyre on the car must only be constructed from 1 compound (shore rating/density) of foam rubber.

**Proposal:**

**Remarks:** This was brought in to outlaw the 2 stage or wrap tyre. These are no longer used or produced anywhere. With the advent of the 38mm rim they became redundant

**Proposed by BRCA**

**Seconded by:** .....  Not  
Seconded

**The proposal:**  Passed Unanimously  Passed with .... for, .... against and .... abstentions.

Rejected with .... for, .... against and .... abstentions.   
Amended

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**THE RULE SHOULD BE AMENDED TO READ:**

7.3.3.

**Existing Rule:** 5 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.

**Proposal:** Tires must be possible to be buy one set at a time.

**Remarks:** It is not fair for the racers if they are forced to buy five sets of tires.

**Proposed by AKK**

**Seconded by:** .....  Not  
Seconded

**The proposal:**  Passed Unanimously  Passed with .... for, .... against and .... abstentions.

Rejected with .... for, .... against and .... abstentions.   
Amended

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## **9. ELECTION OF SECTION CHAIRMAN.**

ELECTRIC TRACK CHAIRMAN Heiner Martin is willing to restand

## **10. ANY OTHER BUSINESS**

## **11. ITEMS FOR GENERAL DISCUSSION.**

The Section Chairman thanked all participants for a constructive meeting, and being no further business the meeting was closed at