EFRA ANNUAL SECTION MEETING

HOTEL Hesperia Sant Just
Barcelona, Spain
31st October and 1st of November 2015

AGENDA ELECTRIC SECTIONS – GENERAL.

1. CHAIRMAN'S WELCOME — Mr. Heiner Martin & Mr. Paul Worsley

The Electric Chairmen 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		
BELARUS		
BELGIUM		
BULGARIA		
CROATIA		
CZECH REP.		
DENMARK		
ESTONIA		
FINLAND		
FRANCE		
GERMANY		
GREAT BRITAIN		
GREECE		
HUNGARY		
IRELAND		
ITALY		
LUXEMBOURG		
MONACO		
NETHERLANDS		
NORWAY		
POLAND		
PORTUGAL		
RUSSIA		
SLOVAK REP.		
SLOVENIA		
SPAIN		
SWEDEN		
SWITZERLAND		
TURKEY		
TOTAL		

Other persons present:

3. MINUTES OF 2014 SECTION MEETING

November 2014 – Valencia, Spain

Matters arising from the minutes:

The minutes were checked and accepted as written at the AGM 2014

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 SHOULD BE AMENDED TO READ:

2.2.

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
The electrical circuit through the windings can only be from the ends of the wires forming the designated number of turns.
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.
The rotor will be identified with the manufacturers name or logo and the unique part number. Applies to all rotors in new motors or new optional rotors from 1st. April 2015 onwards.
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. 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 seperated from the stator windings.
9 If the stator cannot be easily removed from the assembled motor for technical verification of sizes or construction, then the Can/Sleeve must have :- Slots or holes that will allow measurement of the stator length. Slots or holes to allow visual appraisal of the laminates used in the stator.(Rule to be applied to any new range of motor starting 01.01.12. Existing motors without these features are not excluded.)
10.No hybrid motors allowed (mixing of parts from different manufacturers).

Proposal: SPEC´ BRUSHLESS MOTORS (21.5T, 17.5T, 13.5T and 10.5T ´wind´ limit)

Remarks: Add 21.5T motors to the rules for SPEC brushless motors to allow for the new F1 class to be added to the EFRA rules.

Proposed by SRCCA Swiss R/C Cars Association,

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.:
Batteries to comply with the weights specified on the EFRA homologation list, (maximum tolerance for manufacturers is +/- 4%).
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 Part #, 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). A copy of the guidelines for the end-user must be included in the driver's packages for EC´s.
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.

Proposal:

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%).
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 with a maximum nominal voltage of (LiPo 3.8/LiFe 3,3). Individual cells may be wired in parallel. For 2S Packs, the maximum connection "In Series" is two, to give a maximum Final pack nominal voltage of (LiPo 7.6v/LiFe 6.6v). For 1S Packs, cells can only be connected in parallel to give a maximum Final pack nominal voltage of (LiPo 3.8v/LiFe 3.3v). 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 Part #, 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). A copy of the guidelines for the end-user must be included in the driver's packages for EC´s.
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:

Cell technology has advanced. This recognises what is currently being produced and allows manufacturers to identify later technology. Has safety implications.
Under no circumstances should the maximum charge voltage be increased.
If adopted, the date of introduction should be decided.
If adopted, rules 3.3, 3.4, 3.5 will also need amending.

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.:
Batteries to comply with the weights specified on the EFRA homologation list, (maximum tolerance for manufacturers is +/- 4%).
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 Part #, 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). A copy of the guidelines for the end-user must be included in the driver's packages for EC´s.
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.

Proposal:

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 exit wires or pin type connections. Batteries to comply with the weights specified on the EFRA homologation list, (maximum tolerance for manufacturers is +/- 4%).
The maximum case sizes are as follows:
4S Batteries:
Length: 139.0mm.
Width: 47.0mm. (The max. width includes any side exit wires).
Height: 48.2mm. (Chassis location features additional to this dimension are allowed)
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 4S Packs:- the maximum connection "In Series" is four, to give a Final pack voltage of (LiPo 14.8v/LiFe 13.2v) nominal.
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 Part # of the pack, the rated voltage, the chemistry (Lipo/LiFe), the rated energy capacity of the pack in Wh and the "C" rating of the pack. 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. 4S LiPo/LiFe batteries may be charged to a maximum of 16.80v (LiPo) resp. 14.80v (LiFe).
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). A copy of the guidelines for the end-user must be included in the driver´s packages for EC´s.
8. LiPo/LiFe drive batteries must be charged in a "Lipo sack" at all times. Anybody not doing this, will be penalized at the event.
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.
9. Modifications to the original battery case, by removal of material or any modification that could be deemed to affect safety is not allowed.
10. The maximum Wh rating for all LiPo/LiFe batteries is 100Wh.

Remarks:

Add 4S hardcase batteries to the homologation process so they can be used at the new 1/8th electric buggy class.

Why the new 100Wh rating limit?
The maximum Wh rating of 100Wh has to be in the rules to ensure, that the batteries can be taken on a plane. Every battery above 100Whs is considered as dangerous good under IATA rules and can not be carried on a plane by a normal person. Not in the check-in baggage and also not in the carry-on baggage.
The IATA rules make an exception for all batteries with a maximum Wh rating of 100. It is allowed to take these batteries with you in the carry-on baggage so it is easy when travelling to races.
We have to consider this rule and follow it as otherwise it would be nearly impossible to take batteries with you to races where you have to travel by plane.

Why was the 100Wh rating limit not an issue until today?
This rule has been in place for a while now, but with 2S batteries it will never be reached. The Wh rating is defined by the nominal voltage x capacity. So for example a 8000mAh 2S 7.4V LiPo battery has a Wh rating of 7.4V x 7.0Ah = 59.2Wh.
So with all current homologated 2S packs this limit was never reached so it never was an issue. Now with the 4S packs, the 100Wh rating can be reached so we need to consider it now.

Proposed by LRP electronic GmbH,

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:

3.2.1.

Existing Rule:

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) Lithium based batteries must be covered by their safety test certification in accordance with UN Manual of Test and Criteria ST/SG/AC.10/11/Rev.5, Part 3, Sub-Section 38.3, Tests T1 to T8.
(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%).
New batteries have to be submitted to the EFRA Battery Homologation Officer for approval. Subject to the Officer being satisfied that the new cell conforms with technical specifications and commercial availability, the cell will be legal for use from:
- 2S Batteries - the following April 1st.
- 1S Batteries - the following March 1st.
Cells received after the above submission dates (1st. Dec.) 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:
4S Batteries -- A minimum of one individual battery has to be received by 1st. Dec.
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) Lithium based batteries must be covered by their safety test certification in accordance with UN Manual of Test and Criteria ST/SG/AC.10/11/Rev.5, Part 3, Sub-Section 38.3, Tests T1 to T8.
(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%).
New batteries have to be submitted to the EFRA Battery Homologation Officer for approval. Subject to the Officer being satisfied that the new cell conforms with technical specifications and commercial availability, the cell will be legal for use from:
- 4S Batteries - the following April 1st.
- 2S Batteries - the following April 1st.
- 1S Batteries - the following March 1st.
Cells received after the above submission dates (1st. Dec.) 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:

Add 4S hardcase batteries to the homologation process so they can be used at the new 1/8th electric buggy class.

After changing 3.1.1, 3.2.1 also needs to change so the homologation process can be done.

Proposed by LRP electronic GmbH,

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:

3.4.

Existing Rule:

1/10 Touring scale cars will be driven by a lithium based (LiPo/LIFE) battery. Maximum nominal voltage is 7.4 V/ 6.6 volts. Receiver batteries are not allowed.

Proposal:

1/10 Touring scale & Formula 1 cars will be driven by a lithium based (LiPo/LIFE) battery. Maximum nominal voltage is 7.4 V/ 6.6 volts. Receiver batteries are not allowed.

Remarks:

Adjust the rule to allow for the new proposed F1 class

Proposed by SRCCA Swiss R/C Cars Association,

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:

7.1.1.

Existing Rule: European Championships are held in the following classes:
1/10 Off-Road 2WD & 4WD
1/12 Modified & 1/12 13.5T Spec. Brushless
1/10 Touring Cars modified & 1/10 Touring Cars 10.5T Spec. Brushless

Proposal: European Championships are held in the following classes:
1/10 Off-Road 2WD & 4WD
1/12 Modified & 1/12 13.5T Spec. Brushless
1/10 Touring Cars modified & 1/10 Touring Cars 10.5T Spec. Brushless
1/10 Formula One 21.5T Spec

Remarks: During the past 2 years, a lot of the biggest brands in RC have developed 1/10 Formula One cars and still more are to come. Until now, no attempts from EFRA have been made to integrate this substantial part of the electric classes into the rules and events despite the facts that it is most probably the strongest growing class in electric cars since years.

The potential of this class is clearly visible if considering events like the F1 Dutch Masters at Heemstede (NL) organized for the first time this year and having more than 70 entires from all over Europe. The future event F1 Masters of Europe taking place in August 2016 in Lostallo has already registered 30 drivers (1 year prior to the event!).

We think it would make sense to integrate the F1 class into the EFRA rules and events.

Proposed by SRCCA Swiss R/C Cars Association,

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:

8.1.2.

Existing Rule: 1/10th Touring EUROPEAN CHAMPIONSHIP:
THURSDAY: 09:00 Registration, Open and a minimum 2 timed practice, 2 rounds of controlled Practice and 1 Qualifying Round
FRIDAY 09:00 1 timed practice (minimum) and 4 Qualifying Rounds
SATURDAY 09:00 1 Practice Final (minimum) and 3 finals for all
There will be a minimum of 10 min between start of round.
Based on the numbers of participants, this timetable can be changed by the organiser with agreement by the section chairman.

Proposal: 1/10th Touring & 1/10th Formula One EUROPEAN CHAMPIONSHIP:
THURSDAY: 09:00 Registration, Open and a minimum 2 timed practice, 2 rounds of controlled Practice and 1 Qualifying Round
FRIDAY 09:00 1 timed practice (minimum) and 4 Qualifying Rounds
SATURDAY 09:00 1 Practice Final (minimum) and 3 finals for all
There will be a minimum of 10 min between start of round.
Based on the numbers of participants, this timetable can be changed by the organiser with agreement by the section chairman.

Remarks: Adjust the rule to allow for the new proposed Formula One class

Proposed by SRCCA Swiss R/C Cars Association,

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

THE RULE SHOULD BE AMENDED TO READ:

9.4.3.

Existing Rule: 1/10 Touring Cars:- The Qualifying Heats and Finals will be 5 minutes and the last lap plus the time to complete this last lap up to a max of 40 seconds.
At the start of the event at Team Managers Meeting (on Friday morning) it will be decided if the Qualification Rounds will be declared dry or wet based on the weather conditions.

Proposal: 1/10 Touring Cars & 1/10 Formula 1:- The Qualifying Heats and Finals will be 5 minutes and the last lap plus the time to complete this last lap up to a max of 40 seconds.
At the start of the event at Team Managers Meeting (on Friday morning) it will be decided if the Qualification Rounds will be declared dry or wet based on the weather conditions.

Remarks: Adjust the rules to work for the new proposed F1 class

Proposed by SRCCA Swiss R/C Cars Association,

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:

10.2.

Existing Rule: The winner determined from the combined A finals will be the champion. If the A finals cannot be completed, the awards will be made based on the final Qualifying positions.

Proposal: The winner determined from the combined A finals will be the champion. If all finals cannot be completed, the awards will be made based on the final Qualifying positions.

Remarks: All competitors should be treated equally. Therefore all Finals need to be completed for the results of Finals to be used.

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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6. ITEMS FOR GENERAL DISCUSSION.

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

MEETING TO CONTINUE WITH ELECTRIC OFF-ROAD SECTION MEETING.

EFRA ANNUAL GENERAL MEETING

HOTEL Hesperia Sant Just
Barcelona, Spain
31st October and 1st of November 2015

AGENDA ELECTRIC - OFF-ROAD.

1. CHAIRMAN'S WELCOME — Mr Paul Worsley

The Electric Off-road Chairman opened the meeting at

2. APOLOGIES FOR ABSENCE

Apologies have been received from:

COUNTRY	PRESENT	SECTION SUBSCR	REQUESTED:				
			EC	EC			Max33%
			Buggy 2wd	Buggy 4wd			%
AUSTRIA							
BELARUS							
BELGIUM							
BULGARIA							
CROATIA							
CZECH REP.							
DENMARK							
ESTONIA							
FINLAND							
FRANCE							
GERMANY							
GREAT BRITAIN							
GREECE							
HUNGARY							
IRELAND							
ITALY							
LUXEMBOURG							
MONACO							
NETHERLANDS							
NORWAY							
POLAND							
PORTUGAL							
RUSSIA							
SLOVAK REP.							
SLOVENIA							
SPAIN							
SWEDEN							
SWITZERLAND							
TURKEY							
		TOTALS					

Allocations can be changed till December 21th 2015.

Other persons present:

3. MINUTES OF 2014 SECTION MEETING

November 2014 – Valencia, Spain:

Matters arising from the minutes:

The minutes were accepted as written at the AGM 2014.

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

4. CORRESPONDENCE RECEIVED

. Any correspondences from the 2015 season……

5. CHAIRMAN'S REPORT

A full report of the Season is presented by the Section Chairman

6. PRESENTATIONS FOR APPLICATIONS EC AND GP'S 2016/17

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

Year/Date	Alt. Date	Status	Country	Venue
2016		IR/GP	Spain	Valladolid
2016		IR	Belgium	Kampenhout
2017		EC Indoor	Slovakia	Trencin
2017		EC	Italy	Pinerolo
2017		IFMAR WC	Sweden	Trelleborg

Final Race calendar 2016

Year/Date	Alt. Date	Status	Country	Venue
2016		EC	Spain	Valladolid

Future Race calendar Championships

Year/Date	Alt. Date	Status	Country	Venue

Nominated Tyres for the 1/10th. Off-Road EC:

Allocations were made to each country as printed in the table form under item 2 on the agenda.
All Federations MUST confirm their FINAL Allocation Numbers for each event to the relevant Section Chairman by 21th. December LATEST.

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:

3.6.

Existing Rule: No tyre additives other than water are allowed, inside or outside of any tyre. Excess of glue deemed to alter the performance of the tyre is not allowed.

Proposal: Only cleaning of the tyre bead where the tyre is glued to the wheel is allowed. No tyre additives other than water are allowed on any of the other surfaces of the tyre, inside or outside of any tyre. No additives are allowed to be applied to any tyre insert. Excess of glue deemed to alter the performance of the tyre is not allowed. The use of any additives that is deemed by officials for the purpose of improving the tyre performance will result in disqualification from the event.

Remarks: Clarifies what is allowed and clearly states the penalty that will be applied.

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 CHAIRMAN.

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Paul Worsley is willing to restand

9. ANY OTHER BUSINESS

10. ITEMS FOR GENERAL DISCUSSION.

The Section Chairman thanked 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 Hesperia Sant Just
Barcelona, Spain
31st October and 1st of November 2015

AGENDA ELECTRIC - TRACK.

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	WC 1/12	EC 1/10 Touring	WC 1/10 Touring	
AUSTRIA							
BELARUS							
BELGIUM							
BULGARIA							
CROATIA							
CZECH REP.							
DENMARK							
ESTONIA							
FINLAND							
FRANCE							
GERMANY							
GREAT BRITAIN							
GREECE							
HUNGARY							
IRELAND							
ITALY							
LUXEMBOURG							
MONACO							
NETHERLANDS							
NORWAY							
POLAND							
PORTUGAL							
RUSSIA							
SLOVAK REP.							
SLOVENIA							
SPAIN							
SWEDEN							

SWITZERLAND							
TURKEY							
TOTAL			**0**	**0**	**0**	**0**	**0**

Allocations can be changed till December 21th 2015.

Other persons present:

3. MINUTES OF 2014 SECTION MEETING

November 2014 – Valencia, Spain

Matters arising from the minutes:

The minutes were checked and accepted as written at the AGM 2014.

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

4. CORRESPONDENCE RECEIVED

. Any correspondences from the 2015 season……

5. CHAIRMAN'S REPORT

. A full report of the Season is presented by Section Chairmen

6. PRESENTATIONS FOR APPLICATIONS - EC AND GP'S 2016/17

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.

Year/Date	Alt. Date	Status		Country	Venue
2016		EC	1/10 Touring Indoor	Italy	Mordano
2016		EC	1/10 Touring	Slovakia	Trencin
2016		EC	1/10 Touring	Turkey	Izmir
2016		EC	1/12 Indoor	Slovakia	Trencin
2017		EC	1/10 Touring	France	Bonneville
2017		EC	1/10 Touring	Turkey	Izmir
2017		EC	1/10 Touring	Spain	Almussafes
2017		EC	1/10 Touring	Austria	Kirchberg

Final Race calendar 2016

Year/Date	Alt. Date	Status		Country	Venue
2016		EC	1/12	Slovakia	Trencin
2016		EC	1/10 Touring		

Future Race calendar Championships

Year/Date	Alt. Date	Status	Country	Venue
2017				

Tyres for the 1/10th Touring Car EC 2016:

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

7. ALLOCATIONS

Allocations were made to each country as printed in the table form under item 2 on the agenda.
All Federations MUST confirm their FINAL Allocation Numbers for each event to the relevant Section Chairman by 21th. December LATEST

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:

2.1.

Existing Rule: Any newly homologated bodies must have the part number moulded into the front windscreen.

Proposal: Any newly homologated bodies must have the part number moulded into the front windscreen. For 1/10 Formula One Spec class, no body homologation is required.

Remarks: Adjust the rule to work for the new proposed F1 class. No homologation of bodies for F1 deemed necessary for the moment. If required, homologation can be added in following years. To ease start-up of the new class, we propose to run without body homologation for the moment.

Proposed by SRCCA Swiss R/C Cars Association,

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 IS NEW:

7.

Existing Rule: **PARTICULAR TO 1:10 ELECTRIC SALOON CARS**

Proposal: 8. Particular to 1/10 Formula One Spec Cars

8.1 Cars specification
Maximum width: 190mm
Front independent king pin, coil spring suspension is allowed. Suspension pick up points must be mounted inside the body. Independent front shocks are not allowed
The main chassis plate must not protrude from the body when viewed from above
Minimum weight = 1050 grams including personal transponder

8.2 Tires:
The tires will be decided by the section chairman early in the season and will remain in use for a minimum of one year. Tires can be warmed up with the appropriate equipment.

8.3 Additive:
only odorless additive is allowed

8.4 Bodies:
Only Formula 1 body styles are allowed. Body must be painted in a race inspired theme. Single color themes are allowed but you must the included sticker sheet to detailed the car. All cars must have a drivers figure installed in the cockpit.

8.5 Wings:
Front and rear wings must be made of a molded ABS Style plastic similar to a Tamiya Style wing. Front and rear wings made of Lexan material will not be allowed (this includes bolt on Lexan front wings over a smaller ABS plastic wing). Wings equipped with any type of remote adjustment or DRS are not allowed.

8.6 Motor and Speed Control:
The combo (motor + esc) will be decided by the section chairman early in the season and will remain in use for a minimum of two years. The criteria for the choice of motor and esc are:
• quality of the product
• performance of the product
• affordable price
• availability of the product

Remarks: Suggestions for the technical specification for the new proposed F1 class. To be enhanced/adjusted based on further requirements and details.

Proposed by SRCCA Swiss R/C Cars Association,

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:

7.3.3.

Existing Rule: 2 sets of 4 dry weather tyres are allowed for qualifying, and 1 additional set of 4 dry weather tyres is allowed for finals. Tyres from qualifying may be used in the finals. 1 set of 4 wet weather tyres is allowed to be used for both qualifying and finals.

Proposal: 5 sets of 4 dry weather tyres are allowed for qualifying, and 1 additional set of 4 dry weather tyres is allowed for finals. Tyres from qualifying may be used in the finals. 1 set of 4 wet weather tyres is allowed to be used for both qualifying and finals.

Remarks: This will give more consistant competition within each Qualifying 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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9. ELECTION OF VICE SECTION CHAIRMAN.

The position of Vice Section Chairman has one candidate: Chris Hardisty of BRCA

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