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January 8, 2005

## **TO WHOM IT MAY CONCERN**

Further to my letter of November 30, 2004, it is advised that the election of a new IFMAR Electric Section Chairman has now been finalised. The Blocs have elected Mr. Mike Reedy to the position and all electric matters will be now handled by him. His email address is [REEDYMOD@aol.com](mailto:REEDYMOD@aol.com) and, on the attached submittal forms, you will find his postal address to which the motor and battery samples must be sent. Please disregard the submittal forms sent to you on November 30, 2004.

The 2005 IFMAR World Championships for the Electric Off-road classes (1/10<sup>th</sup> 2WD and 4WD) will be held in Collegno, Italy from August 6-13, 2005. Your company has submitted motors and/or batteries for approval for previous IFMAR World Championships. Enclosed are details of how to obtain approval for your motor and battery products for the 2005 events.

Any products previously approved do not need to be resubmitted. IFMAR approves the construction only, that is the can, endbell, armature or the cell type and markings. If the motors and/or batteries are already approved, you have no need to seek new approval. If you are not sure, please contact the IFMAR Electric Section Chairman, Mr. Mike Reedy at [REEDYMOD@aol.com](mailto:REEDYMOD@aol.com) and he will answer your questions by return. If you have no new motors and/or batteries for approval for the 2005 events, please destroy these Homologation Forms as they cannot be used for future IFMAR Electric W.C. events. If you have products not approved (or products which are significantly changed after the last approval), and you wish them to be approved for official use at the 2005 Electric Off-road W.C. and future IFMAR W.C. events, you must send them for approval.

**BATTERIES FOR APPROVAL MUST BE RECEIVED AT THE ADDRESS ON THE FORM BY FEBRUARY 6, 2005.**

**MOTORS FOR APPROVAL MUST BE RECEIVED AT THE ADDRESS ON THE FORM BY APRIL 6, 2005.**

By these dates, the IFMAR Electric Section Chairman must receive the samples of the product, evidence of the availability of the product, and the completed homologation form. **ANY PRODUCT OR FORMS RECEIVED AFTER THE CLOSING DATE CANNOT BE APPROVED FOR THE 2005 ELECTRIC OFF-ROAD WORLD CHAMPIONSHIPS.** Products not approved cannot be used by any competitor at the 2005 Off-road Electric IFMAR World Championships.

The approval procedure is very easy. If you have any questions please contact Mr. Mike Reedy direct at the email address above and he will assist you. The IFMAR Electric Section will look forward to receiving your products for approval **BEFORE** the deadline noted above.

N.B. As advised on November 11, 2004, the battery rules were amended in 2003 and the submittal date for batteries is now eight (8) months prior to the W.C. event. However, as notification of this rule change was not distributed to manufacturers during 2004, it was agreed by the Blocs at a recent IFMAR Meeting that a dispensation will be allowed for the 2005 W.C. events **ONLY** and the deadline date for battery submittal will be extended to **FEBRUARY 6**. i.e. six (6) months prior to the events. For the 2006 IFMAR Electric On-road W.C. events, the deadline date for battery submittal will be as per the new rule, i.e. eight (8) months prior to the 2006 events.

John Grant,  
President IFMAR.

P.S. Please ensure that, if or when sending samples to U.S.A. for homologation purposes, you state on the Customs Declaration Form "Samples Only – No Commercial Value".



# Motor and Battery Homologation Procedure

## READ THIS FIRST

The International Federation of Model Auto Racing (IFMAR) allows only approved motors and batteries to be used in its sanctioned World Championship meetings. This approval is to ensure that all competitors have equal access to the latest motors and batteries, thus ensuring wherever possible, fair racing to decide the World Champion. IFMAR makes no representation as to the quality or efficacy of the products approved. If parts of an approved motor are changed, the motor must be sent to IFMAR for re-approval.

Any manufacturer, distributor, agent or retailer may submit products for approval. Providing the products meet the specifications and requirements of the IFMAR rules in force at the time of approval, are submitted by the closing date and meet the availability requirements of IFMAR rules, IFMAR will approve the product.

## MOTORS

Follow this procedure please:

Complete the IFMAR Motor Homologation Form.

Prepare (1) copy of the commercial documents required (Invoices, Advice notes, etc) which show receipt of 5,000 parts and sale of 300 motors in accordance with the IFMAR Rules.

Send three (3) teardown motors with the Motor Homologation Form and the commercial documents to the IFMAR Electric Section Chairman in the U.S.A.

Send three (3) motors with a copy of the Motor Homologation Form to the IFMAR approved laboratory for checking. The laboratory is:

Microtek Laboratories  
1435 S. Allec Street  
Anaheim. CA 92805. U.S.A.  
Tel: +1-714-999-1616  
Fax: +1-714-999-1636  
Contact: Mr. Russell S. Shephard  
Email: [Russ@THETESTLAB.com](mailto:Russ@THETESTLAB.com)

## BATTERIES

Complete the IFMAR Battery Homologation Form.

Prepare one (1) copy of the commercial documents showing that 100,000 cells are available and the addresses of shops which sell the batteries.

Send nine (9) samples of the cell, together with the Homologation Form and the commercial documents, to the IFMAR Electric Section Chairman in the U.S.A.



# Electric Section

## MOTOR HOMOLOGATION FORM

Motor Specification Checklist						Fill in the shaded boxes with the details of the motor being submitted for approval	
						For IFMAR use only	
Requirement	Nominal Size	Tolerance +/-	Acc	Rej	n/a	Availability	Evidence (Invoices, etc.)
Displacement						300 sent to Hobby Stores, Distributors, OEM's	
Can Diameter							
Can Length							
Shaft Dia.						5000 motors available at your Company	
Magnet Type							
Trade Name of Motor							

Please fill in the details above for one type of motor. Use another form for more types of motor (photocopies accepted). Copies of invoices, receiving notes, etc. for availability check to be attached separately. Send this form with 3 (three) samples (teardown or fully built) of the motor to:

Mr. Mike Reedy  
 3676C Aspen Village Way  
 SANTA ANA. CA 92704.  
 U.S.A.

**APPROVAL FOR THE  
 2005 ELECTRIC OFF-ROAD  
 WORLD CHAMPIONSHIPS  
 CLOSING DATE: APRIL 6, 2005**

Company Name: .....

Address : .....

.....

.....

.....

Country: .....

<p>For IFMAR use only:                  Approval by IFMAR Laboratory - Microtek Inc.                  Microtek date received : .....</p> <p>The motors submitted to Microtek Laboratories meet the current applicable IFMAR specifications.                  Authorised Signatory and Date:                  .....</p>
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I agree that the above information is correct to the best of my knowledge. I accept that the samples submitted will be used to check motors at the IFMAR World Championships.

Signed: ..... Name: ..... Position: .....



# Electric Section

## Battery Homologation Form

Battery Specification Checklist			Fill in the shaded boxes with the details of the battery cell being submitted for approval				
Requirement	Nominal Size	Tolerance +/-	For IFMAR use only			Availability	Evidence (Invoices, etc.)
			Acc	Rej	n/a		
Cell Size						Maximum and minimum weight of single cell  100,000 cells available at your Company	
Cell Diameter							
Cell Length							
Cell Materials							
Nominal Volts							
Trade Name of Cell							
Ampere-Hr Rating							

Please fill in the details above for one battery type. Use another form for more battery types (photocopies accepted). Copies of invoices, receiving notes, etc. for availability check to be attached separately. Send this form with 9 (nine) samples (fully marked and shrink-wrapped) of the battery cell to:

Mr. Mike Reedy  
 3676C Aspen Village Way  
 SANTA ANA. CA 92704.  
 U.S.A.

### APPROVAL FOR THE 2005 IFMAR ELECTRIC OFF-ROAD WORLD CHAMPIONSHIPS

**CLOSING DATE: FEBRUARY 6, 2005**

Company Name: .....

Address:  
 .....  
 .....  
 .....  
 .....

Country: .....

I agree that the above information is correct to the best of my knowledge. I accept that the samples submitted will be used to check batteries at the IFMAR World Championships.

Signed:.....Name: .....Position: .....



## MOTOR AND BATTERY HOMOLOGATION PROCEDURE

### EXTRACT FROM THE IFMAR ELECTRIC OFF-ROAD W.C. RULES

#### 4.3 BATTERIES APPROVAL

4.3.1 The deadline date for submitting batteries (cells) to be approved for that year's World Championship is eight (8) months prior to the date of the Opening Ceremony of the World Championships. Applications for approval must be submitted to IFMAR.

The submittal for approval must contain a written technical specification from the original cell manufacturer for verification. A minimum of 100,000 individual cells must have been sold (by the person/company requesting approval) to commercial outlets in the retail or distribution sector of the hobby industry. The submittal for approval must conform to the procedure current at the time for IFMAR approval – copies available on request.

4.3.2 A verification of availability will be made four (4) months prior to the date of the Opening Ceremony of the World Championship. A list of telephone numbers, email addresses and postal addresses of retail suppliers in each Bloc from whom the cells can be purchased must be submitted with the application. The manufacturer has to provide addresses of hobby shops, where any driver who wishes to obtain these batteries at the time of approval can do so. Failure of verification will result in the non-approval of the product.

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

#### 4.3.4 Batteries Technical

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

4.3.5 All cells must be submitted to Technical Inspection for checking and marking prior to being used during Controlled Practice, Qualifying and Finals. This may be completed at any time. Cells which do not bear the Organiser's mark may not be used for Controlled Practice, Qualifying and Finals. The Organiser and IFMAR Officials may check the legality of a competitor's cells at any time during the W.C. event. A weight scale will be available at all times during the event for competitors to carry out weight checks on cells.

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

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

4.3.8 Cars will be driven by a maximum of 6 cells and 7.2 volts maximum.

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

#### 4.4 MOTORS

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

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

4.4.2 An approved products list of motors approved for use in the World Championships must be included in the

race acknowledgement package sent to each competitor no later than two (2) months prior to the event.

Specifications: '05' sized displacements.

Can diameter to be a maximum of 36.02mm  
Can length to be maximum of 53mm measured from the mounting face of the motor to the furthest point not including solder, tabs or lead wires. Shaft diameter is .125 inch. Production Tolerances allowed. Ceramic magnets only (cobalt and rare earth magnets specifically not allowed) Current is supplied to the armature by two (2) brushes.

Armature – The rotor is to have three (3) poles with windings. Stack length without epoxy – minimum 21 mm and maximum is 22.8 mm. Only copper wire is to be used for the winding. No split rotor is allowed. The laminations have to be one after the other without anything between. The thickness of the stack plates is 0.35 mm  $\pm$  0.05 mm, a maximum of 63 laminations to be used. The minimum stack thickness is 3.5 mm. A minimum of 5,000 units must be available at the time of approval. A minimum of three hundred (300) motors must have been sold to at least three (3) distributors or hobby shops or OEM's at the time of submittal. The manufacturer has to provide an address of a Hobby shop or the like, that any driver who wishes to obtain these motors at the time of approval can do so. Approved motors may be modified by re-winding, balancing, truing of commutators, epoxying, ball bearings, brushes and custom brush systems only. No hybrid (mixing of parts from approved motors) allowed.

4.4.3 Reverse if not allowed – forward control only.

4.4.4 Only fixed single ratio transmissions allowed.