EFRA HANDBOOK 2025

EFRA ASSOCIATE MEMBERS EFRA

RC MOTORSPORT EUROPE

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APPENDIX 8
HOMOLOGATION OF MUFFLERS

1. GENERAL

Each motor must be equipped with an exhaust system and inlet silencer to reduce the amount of noise generated by the car. The noise level is a combination of RPM, motor design and performance, muffler, manifold, gearing and body. The better the combination, the more performance and more RPM. Since EFRA can only check 2 of these items (muffler and INS box) there is no way to control the noise in a good way on a track without extra measurements. The only solution is measurement on the track by means of a so called "Noise Trap". For the future we will talk about registration of mufflers and no longer about homologation, simply to avoid interpretations as that a homologated muffler is always OK. The legal noise level within the European Community is 83 dBs, without the need for extra personal protection. EFRA's definition of a noise level is always final. For 1/8 th IC track races only EFRA registered mufflers with a minimum of 3-chambers are allowed on EFRA sanctioned events. The EFRA registration number must be engraved on the sidewall of the muffler.

For 1/8th Off Road, only EFRA registered with a minimum of 3-chamber mufflers are allowed. The EFRA registration number must be engraved on the sidewall of the muffler. For 1/10th IC track, only EFRA registered 2-chamber mufflers list are allowed on EFRA sanctioned events. The EFRA registration number must be engraved on the sidewall of the muffler. For GT8 IC track races only EFRA registered mufflers with a minimum of 3-chambers are allowed on EFRA sanctioned events. The EFRA registration number must be engraved on the sidewall of the muffler. The sections will use a so called "Noise Trap" to check noise level on the events. Depending on the track layout the noise trap will be installed and used to take out cars that make too much noise. The final noise limit for an event must be set prior to timed practice.

All mufflers on the 2013 list that are still sold and manufactured must be registered again before March 1st 2014 to be able to be used for the 2014 season. The registration period will be limited to 2 years and needs to be renewed after that period. Mufflers that were allowed in 2013, EFRA 2103 till 2109 do not need registration for 2014, including the RCE mufflers with the double wall and rear muffler outlet. WHY REGISTRATION. Registration is needed to be sure mufflers are made according to specific dimensions. Registration is needed to make sure there is a product available in the shops Registration is needed to avoid self made mufflers used at club level. Registration is needed to control the design and weight which are part of the noise production.

2 REGISTRATION FEE

Will be: see General Rules 3.5.7. > 120 euro (60 euro for Assoc. Members).

3. REGISTRATION NUMBER:

Every accepted muffler is issued with an EFRA registration number which must be indelibly pressed or milled on the sidewall.

4. TECHNICAL DETAILS

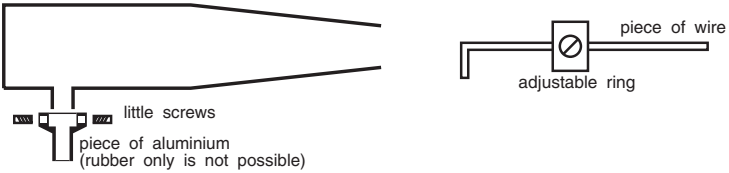
A very important factor in the control of the noise level of a muffler is the design of the mandatory 2nd and 3rd chamber and the total length of the outlet pipe. The outlet pipe for 1/8th scale may have a maximum of 8.00mm diameter. For 1/10th the maximum is 5.20 mm

5. TOLERANCES

Recognizing that the component parts of a muffler are joined together, it is quite clear, that there may be some slight differences in total measurements. This will not lead to dramatic noise level variation, but one important point must be mentioned: The 2nd cone must be in line with the outlet pipe, if this is a feature of the original design. The outlet pipe may have a minus-tolerance of 2 mm. To check the total length of the outlet pipe use a tool similar to that shown below.

6. PRACTICAL TIP

Some drivers cut the outlet pipe, because they fear damage during the race. Of course this is not allowed. To help in such a case, here is a tip:



7. EFRA REGISTRATED MUFFLERS

Updated lists of mufflers which are registrated each years will be found on the EFRA-website.

8. INS box dimensions.

The performance of the INS box is based on its form and measurements. Therefore it is strictly forbidden to change anything on its internal dimensions. The INS box for 1:8 and 1:10 are the same, only the foam filter has another dimension to fit the carburetor. A list of the approved INS-Box will be published on the EFRA webpage.

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